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ANNUAL CALENDAR

OF

McGILL COLLEGE

AND

UNIVERSITY,

MONTREAL.

FOUNDED UNDER BEQUEST OF THE HON. JAMES McGILL
ERECTED INTO A UNIVERSITY BY ROYAL CHARTER
IN 1821, AND RE-ORGANIZED BY AN
AMENDED CHARTER IN 1852.

SESSION 1887-8.

Montreal:
PRINTED FOR THE UNIVERSITY BY JOHN LOVELL & SON

1887.

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The *Examination Papers* of the Session 1886-87 are published separately, and may be purchased of the Secretary, or through book sellers.

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[*Being the Members of the Royal Institution for the Advancement of Learning.*]

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(The Governors, Principal and Fellows constitute, under the Charter, the Corporation of the University, which has the power, under the Statutes, to frame regulations touching the Courses of Study, Matriculation, Graduation and other Educational matters; and to grant Degrees.)

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[*And Secretary of the Royal Institution.*]

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Office Hours: 9 to 5.

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THOMAS G. RODDICK, M.D.
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HENRY T. BOVEY, M.A., A.M.I.C.E., M.I.M.E., Fellow Queen's College, Cambridge.
Dean of the Faculty of Applied Science, Professor of Civil Engineering and Applied Mechanics. 31 Ontario Avenue.

CHARLES E. MOYSE, B.A. (London).
Molson Professor of English Language and Literature, Lecturer in History, 802 Sherbrooke.

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Professor of Criminal and Constitutional Law. 113 Mackay

EDMOND LAREAU, D.C.L.
Professor of Legal History. 194 St. Denis Street.

MATTHEW HUTCHINSON, D.C.L.
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LIBRARY.

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General Statement.

SESSION OF 1887-'8.

Tho Fifty-fifth Session of the University, being the Thirty-fourth under the amended Charter, will commence in the Autumn of 1887.

By Virtue of the Royal Charter, granted in 1821 and amended in 1852, the Governors, Principal and Fellows of McGill College constitute the Corporation of the University; and, under the Statutes framed by the Board of Governors, with approval of the Visitor, have the power of granting Degrees in all the Arts and Faculties, in McGill College, and Colleges affiliated thereto.

The Statutes and Regulations of the University have been framed on the most liberal principles, with the view of affording to all classes of persons the greatest possible facilities for the attainment of mental culture and professional training. In its religious character the University is Protestant, but not denominational; and while all possible attention will be given to the character and conduct of students, no interference with their peculiar religious views will be sanctioned.

The educational work of the University is carried on in McGill College, Montreal, and in the Affiliated Colleges and Schools.

I. McGILL COLLEGE.

THE FACULTY OF ARTS.—The complete course of study extends over four Sessions, of eight months each; and includes Classics and Mathematics, Experimental Physics, English Literature Logic, Mental and Moral Science, Natural Science, and one Modern Language, or Hebrew. The course of study is, with few exceptions, the same for all students in the first two years; but in the third and fourth years extensive options are allowed, more especially in favour of the Honour Courses in Classics, Mathematics, Mental and Moral Science, Natural Science, English Literature and Modern Languages. Certain exemptions are also allowed to professional Students. The course of study leads to the Degrees of B.A., M.A., and LL.D.

THE DONALDA SPECIAL COURSE IN ARTS provides for the education of women, in separate classes, with course of study, exemptions and honours similar to those of men.

THE FACULTY OF APPLIED SCIENCE provides a thorough professional training, extending over three or four years, in Civil Engineering, Mechanical Engineering, Mining Engineering and Assaying, and Practical Chemistry, leading to the Degrees of Bachelor of Applied Science, Master of Engineering, and Master of Applied Science.

THE FACULTY OF MEDICINE.—The complete course of study in Medicine extends over four Sessions, of six months each, and one Summer Session of three months in the third Academic Year, and leads to the Degree of M.D., C.M.

THE FACULTY OF LAW.—The complete course in Law extends over three Sessions, of six months each, and leads to the Degrees of B.C.L. and D.C.L.

II. AFFILIATED COLLEGES.

Students of Affiliated Colleges are matriculated in the University, and may pursue their course of study wholly in the Affiliated College, or in part in McGill College, and may come up to the University Examinations on the same terms with the Students of McGill College.

MORRIN COLLEGE, *Quebec*—Is affiliated in so far as regards Degrees in Arts and Law.

[Detailed information may be obtained from Rev. John Cook, D.D., Principal.]

ST. FRANCIS COLLEGE, *Richmond*—Is affiliated in so far as regards the Intermediate Examinations in Arts.

[Detailed information may be obtained from Principal Bannister, B.A., Richmond, P.Q.]

III. AFFILIATED THEOLOGICAL COLLEGES.

Affiliated Theological Colleges have the right of obtaining for their Students the advantage, in whole or in part, of the course of study in Arts, with such facilities in regard to exemptions as may be agreed on.

THE CONGREGATIONAL COLLEGE OF BRITISH NORTH AMERICA, *Montreal.*

THE PRESBYTERIAN COLLEGE, MONTREAL, in connection with the Presbyterian Church in Canada.

THE DIOCESAN COLLEGE OF MONTREAL.

THE WESLEYAN COLLEGE OF MONTREAL.

IV. AFFILIATED SCHOOLS.

THE MCGILL NORMAL SCHOOL provides the training requisite for Teachers of Elementary and Model Schools and Academies. Teachers trained in this School are entitled to Provincial Diplomas.

THE MODEL SCHOOLS OF THE MCGILL NORMAL SCHOOL are Elementary Schools divided into a Boys' Department, Girls' Department, and Primary School.

COLLEGIATE INSTITUTES, ACADEMIES, and HIGH SCHOOLS may be affiliated in so far as regards Matriculation in Arts and Applied Science, under the University regulations. The following are at present so recognized :—

Prince of Wales College, Charlottetown, P.E.I. ; Collegiate Institute, Hamilton, Ont. ; Canadian Literary Institute, Woodstock, Ont. ; High School, Montreal ; Bishop's College School, Lennoxville ; Girls' High School, Montreal ; Lachute Academy ; Knowlton Academy; Cowansville Academy ; Charleston Academy, Hatley ; High School, New Westminster, B.C., Misses Symmers and Smith's School, Montreal ; Ladies' Academy, Sherbrooke ; Mrs. Watson's School, Montreal ; Stanstead Wesleyan College ; Inverness Academy ; Huntington Academy.

BENEFACTORS OF

McGill University, Monteral,

I. ORIGINAL ENDOWMENT, 1811.

THE HONOURABLE JAMES McGILL, who was born at Glasgow, 6th Oct., 1744, and died at Montreal, 19th Dec., 1813, by his last will and testament, under date 8th January, 1811, devised the Estate of Burnside, situated near the City of Montreal, and containing forty-seven acres of land, with the Manor House and Buildings thereon erected, and also bequeathed the sum of ten thousand pounds in money, unto the "Royal Institution for the Advancement of Learning," a Corporation constituted in virtue of an Act of Parliament passed in the Forty-first Year of the Reign of His Majesty, King George the Third, to erect and establish a University or College, for the purpose of Education and the advancement of learning in the Province of Lower Canada, with a competent number of Professors and Teachers to render such Establishment effectual and beneficial for the purposes intended; requiring that one of the Colleges to be comprised in the said University should be named and perpetually be known and distinguished by the appellation of "McGill College."

The value of the above-mentioned property was estimated at the date of the bequest at.....$120,000

II. UNIVERSITY BUILDINGS.

THE WILLIAM MOLSON HALL, being the west wing of the McGill College buildings, with the Museum Rooms, and the Chemical Laboratory and Class Rooms, was erected in 1861, through the munificent donation of the founder, whose name it bears.

THE PETER REDPATH MUSEUM, the gift of the donor whose name it bears, was announced by him as a donation to the University in 1880, and was formally opened to the public, August, 1882.

III. THE DONALDA ENDOWMENT FOR THE HIGHER EDUCATION OF WOMEN.

This endowment, given by the Honorable Sir Donald A. Smith of Montreal, is for the education of women in the subjects of the Faculty of Arts up to the standard of the examination for B. A., in classes wholly separate, to constitute a separate Special Course or College for women,—$120,000.

IV. ENDOWED CHAIRS.

THE MOLSON CHAIR OF ENGLISH LANGUAGE AND LITERATURE, in 1856, by the Honorable John Molson, Thomas Molson, Esq., and William Molson, Esq., —$20,000.

THE PETER REDPATH CHAIR OF NATURAL PHILOSOPHY, in 1871, by Peter Redpath, Esq.,—$20,000.

THE LOGAN CHAIR OF GEOLOGY, in 1871, by Sir W. E. Logan, LL.D., F.R.S., and Hart Logan, Esq.,—$20,000.

THE JOHN FROTHINGHAM CHAIR OF MENTAL AND MORAL PHILOSOPHY, in 1873, by Miss Louisa Frothingham,—$20,000.

THE WILLIAM SCOTT CHAIR OF CIVIL ENGINEERING, in 1884, endowed by the last will of the late Miss Barbara Scott, of Montreal,—$30,000.

THE MAJOR HIRAM MILLS CHAIR OF CLASSICS, in 1882, endowed by the last will of the late Major Hiram Mills of Montreal,—$42,000.

THE DAVID J. GREENSHIELDS CHAIR OF CHEMISTRY AND MINERALOGY, in the Faculties of Arts and Applied Science, in 1883, endowed by the last will of the late David J Greenshields, Esq., of Montreal,—$40,000.

THE GALE CHAIR, in the Faculty of Law, endowed by the late Mrs. Andrew Stuart (née Agnes Logan Gale), of Montreal, in memory of her father, the late Honorable Mr. Justice Gale,—$25,000 ; part received, May, 1887.

V. EXHIBITIONS AND SCHOLARSHIPS.

THE JANE REDPATH EXHIBITION, in the Faculty of Arts, $100 annually—founded in 1868 by Mrs. Redpath, of Terrace Bank, Montreal, and endowed with the sum of $1,667.

THE MCDONALD SCHOLARSHIPS AND EXHIBITIONS, 10 in number, in the Faculty of Arts—founded in 1871, and endowed with the sum of $25,000, in 1882, by William C. McDonald, Esq.—Annual value, $1,250.

THE CHARLES ALEXANDER SCHOLARSHIP, for Classics—founded in 1871, by Charles Alexander, Esq.—Annual value, $120.

THE SCOTT EXHIBITION—founded by the Caledonian Society of Montreal, in commemoration of the Centenary of Sir Walter Scott, and endowed in 1872 with the sum of $1,100, subscribed by members of the Society, and other citizens of Montreal. The Exhibition is given annually in the Faculty of Applied Science. Annual value $60.

THE ARBARA SCOTT SCHOLARSHIP FOR CLASSICAL LANGUAGE AND LITERATURE—founded by the last will of the late Miss Barbara Scott of Montreal, in the sum of $2,000 :—in 1884. Annual value, $100.

THE GEORGE HAGUE EXHIBITION.—founded in 1881 in the Faculty of Arts, Annual value $125.

THE MAJOR HIRAM MILLS MEDAL AND SCHOLARSHIP.—in the Faculty of Arts, founded by the will of the late Major Hiram Mills of Montreal, and endowed with the sum of $1,500.—Annual value $75.

VI. ENDOWMENTS OF MEDALS AND PRIZES.

In 1856 Henry Chapman, Esq., founded a gold medal, to be named the "Henry Chapman Gold Medal," to be given annually in the graduating class in Arts. This Medal was endowed by Mr. Chapman in 1874, with the sum of $700.

In 1860 the sum of £200, presented to the College by H. R. H. the Prince of Wales, was applied to the foundation of a Gold Medal, to be called the "Prince of Wales Gold Medal," which is given in the graduating class for Honour Studies in Mental and Moral Philosophy.

In 1864 the "Anne Molson Gold Medal" was founded and endowed by Mrs. John Molson, of Belmont Hall, Montreal, for an Honour Course in Mathematics and Physical Science.

In the same year the "Shakespeare Gold Medal," for an Honour Course, to comprise and include the works of Shakespeare and the Literature of England from his time to the time of Addison, both inclusive, and such other accessory subjects as the Corporation may from time to time appoint—was founded and endowed by citizens of Montreal, on occasion of the three hundredth anniversary of the birth of Skakespeare.

In the same year the "Logan Gold Medal," for an Honour Course in Geology and Natural Science, was founded and endowed by Sir William Logan, LL.D., F.R.S., F.G.S., &c.

In 1865 the "Elizabeth Torrance Gold Medal" was founded and endowed by John Torrance, Esq., of St. Antoine Hall, Montreal, in memory of the late Mrs. John Torrance, for the best student in the graduating class in Law, and more especially for the highest proficiency in Roman Law.

In the same year the "Holmes Gold Medal" was founded by the Medical Faculty, as a memorial of the late Andrew Holmes, Esq., M.D., LL.D., late Dean of the Faculty of Medicine, to be given to the best student in the graduating class in Medicine, who shall undergo a special examination in all the branches, whether Primary or Final.

In 1874 a Gold and Silver Medal were given by his Excellency the Earl of Dufferin, Governor General of Canada, for competition in the Faculty of Arts, and continued till 1878.

In 1878 the "Sutherland Gold Medal" was founded by Mrs. Sutherland of Montreal, in memory of her late husband, Prof. William Sutherland, M.D., for competition in the classes of Theoretical and Practical Chemistry in the Faculty of Medicine, together with creditable standing in the Primary Examinations.

In 1875 the "Neil Stewart prize of $20 in Hebrew" was endowed by Neil Stewart, Esq., of Vankleek Hill, in the sum of $340.

In 1880 a Gold and Silver Medal were given by His Excellency the Marquis of Lorne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science ; continued till 1883.

In 1883 a Gold, Silver and Bronze Medal were given by R. J. Wicksteed, Esq., M.A., LL.D., for competition in "Physical Culture" by Students in the Graduating Class and 2nd and 3rd years, who have attended the University Gymnasium.

In 1884 a Gold and a Silver Medal were given by His Excellency the Marquis of Lansdowne, Governor General of Canada, the former for competition in the Faculty of Arts, the latter for competition in the Faculty of Applied Science.

In 1885 the British Association Gold Medal for competition in the graduating class in the Faculty of Applied Science, was founded by subscription of members of the British Association for the Advancement of Science, and by gift of the council of the Association, in commemoration of its meeting in Montreal in the year 1884.

VII. SUBSCRIPTIONS TO GENERAL ENDOWMENT.

1856.

John Gordon McKenzie, Esq...	$2000	Charles Alexander, Esq.....	$600
Ira Gould, Esq.....	2000	Moses E. David, Esq.....	600
John Frothingham, Esq.....	2000	Wm. Carter, Esq.....	600
John Torrance, Esq.....	2000	Thomas Patton, Esq.....	600
James B. Greenshields, Esq....	1200	Wm. Workman, Esq.....	600
William Busby Lambe, Esq...	1200	Honourable Sir A. T. Galt....	600
Sir George Simpson, Knight...	1000	Honourable Luther H. Holton.	600
Henry Thomas, Esq.....	1000	Henry Lyman, Esq.....	600
John Redpath, Esq	1000	David Torrance, Esq.....	600
James McDougall, Esq.....	1000	Edwin Atwater, Esq.....	600
James Torrance, Esq.....	1000	Theodore Hart, Esq.....	600
Honourable James Ferrier.....	1000	William Forsyth Grant, Esq...	600
Harrison Stephens, Esq.....	1000	Robert Campbell, Esq.....	600
Henry Chapman, Esq.....	600	Alfred Savage, Esq.....	600
Honourable Peter McGill.....	600	James Ferrier, jun., Esq.....	600
John James Day, Esq.....	600	William Stephen, Esq.....	600
Thomas Brown Anderson, Esq.	600	N. S. Whitney, Esq.....	600
Peter Redpath, Esq.....	600	William Dow, Esq.....	600
Thomas M. Taylor, Esq.....	600	William Watson, Esq.....	600
Joseph McKay, Esq.....	600	Edward Major, Esq.....	600
Donald Lorn McDougall, Esq..	600	Honourable Charles Dewey Day.	200
Honourable Sir John Rose.....	600	John R. Esdaile, Esq.....	200

1871.

William Molson, Esq. .	$5000	T. W. Ritchie, Esq. .	$600
William C. McDonald, Esq.	5000	Messrs. A. & W. Robertson.	600
Thomas Workman, Esq.	5000	Messrs. Sinclair, Jack & Co.	250
John Frothingham, Esq.	5000	John Reddy, Esq., M.D.	100
J. H. R. Molson, Esq.	5000	Wm. Lunn, Esq	100
John McLennan, Esq	2000	Kenneth Campbell, Esq	100
B. Gibb, Esq	600	R. A. Ramsay, Esq	100
W. Notman, Esq	600	William Rose, Esq	50

1881–82.

Hugh McLennan, Esq.	$5000	O. S. Wood, Esq	$1000
G. A. Drummond, Esq.	4000	J. S. McLachlan, Esq.	1000
George Hague, Esq.	3000	J. B. Greenshields, Esq., (London	1000
M. H. Gault, Esq.	2000	Warden King, Esq	1000
Andrew Robertson, Esq.	1000	W. B. Cumming	1000
Robertson Campbell, Esq.	1000	Mrs. Hew Ramsay	500
J. Hickson, Esq., & Mrs. Hickson	1000	R. A. Ramsay, Esq	500
Mrs. Andrew Dow	1000	H. H. Wood, Esq	500
Alexander Murray, Esq.	1000	James Burnett, Esq	500
Miss Orkney	1000	Charles Gibb, Esq	500
Hector MacKenzie, Esq.	1000		

1883--84.

Edward Mackay, Esq. $5000

VIII. SUBSCRIPTIONS FOR CURRENT EXPENSES IN 1881-82.

Principal Dawson	$1000	Being	$1000
J. H. R. Molson, Esq.	1000	Per annum, 5 years being	5000
George Stephen, Esq.	1000	" " "	5000
Hon. Donald A. Smith	1000	" " "	5000
David Morrice, Esq.	200	" " "	1000
Messrs. Gault Brothers & Co.	200	" " "	1000
Messrs. A. S. & S. H. Ewing.	200	" " "	1000
Hon. Robert Mackay	300	Per annum, 2 years, being	600
Jonathan Hodgson, Esq.	100	Per annum, 5 years, being	500
Geo. M. Kinghorn, Esq.	100	" " "	500
Thomas Craig, Esq.	100	Per annum, 2 years, being	200
John Rankin, Esq.	200	Being	200
John Duncan, Esq.	200	"	200
Robert Benny, Esq.	100	"	100
Miss E. A. Ramsay	100	"	100
Hugh Paton, Esq.	50	For 2 years, being	100
George Brush, Esq.	25	For 5 years, being	125
J M. Douglas, Esq.	50	Being	50
James Court, Esq.	50	"	50
David J. Greenshields, Esq.	300	"	300

IX. ENDOWMENT FOR FACULTY OF APPLIED SCIENCE.

1871.

Daniel Torrance, Esq	$5000
George Moffatt, Esq	1000
Charles J. Brydges, Esq	1000

X. ANNUAL SUBSCRIPTIONS IN AID OF THE FACULTY OF APPLIED SCIENCE.

1871.

Hon. James Ferrier (per annum, for 10 years)	$100
Peter Redpath, Esq (per annum, for 10 years)	400
John H. R. Molson, Esq. (per annum, for 10 years)	400
George, H. Frothingham, Esq. (per annum, for 7 years)	400
T. James Claxton, Esq. (per annum, for 6 years)	100
Donald Ross, Esq. (per annum, for 5 years)	50

1878-79.

Miss Mary Frothingham (per annum, for 3 years)	$400
H. McLennan, Esq. (per annum, for 5 years)	100
A. F. Gault, Esq., do do	100
Gilbert Scott, Esq., for 2 years	100
Joseph Hickson, Esq., do	100
Principal Dawson, do	300
His Excellency the Marquis of Lorne	500
Mrs. Redpath (Terrace Bank)	100

1882 83.

To provide assistance in Mechanical Engineering.

E. B. Greenshields, Esq	$50
J. E. Bovey, Esq	50
Professor H. T. Bovey	61
Smaller amounts	40

XI. SUBSCRIPTIONS FOR SPECIAL OBJECTS.

1883–84.

Subscription for the support of the Chair of Botany.

Principal Dawson	$500	Per annum,	5	years, being	$2500
Hon. D. A. Smith	250	"	"	"	1250
J. H. R. Molson, Esq	100	"	"	"	500
Mrs. J. H. R. Molson	100	"	"	"	500
G. Hague, Esq	100	"	"	"	500
Mrs. Redpath	100	"	"	"	500
Hugh Mackay, Esq	100	"	"	"	500
Robert Moat, Esq	100	"	"	"	500
W. C. McDonald, Esq	100	"	"	"	500
Charles Gibb, Esq	50	"	"	"	250
Miss Orkney	50	"	"	"	250
Robert McKay, Esq	50	"	"	"	250
Mrs. Molson	50	"	"	"	250
Mrs. John Molson	50	"	"	"	250
John Stirling, Esq	50	"	"	"	250
Warden King, Esq	50	"	"	"	250
Miss Hall	50	"	"	"	250
Robert Angus, Esq	50	"	"	"	250
D. A. P. Watt, Esq	50	"	"	"	250
Hugh McLennan, Esq	25	"	"	"	125
Joseph Hickson, Esq	10	"	"	"	50
Mrs. Phillips					10

Subscriptions for the purchase of Philosophical Apparatus, 1867.

William Molson, Esq	$500	John Frothingham, Esq	$100
John H. R. Molson, Esq	500	David Torrance, Esq	100
Peter Redpath, Esq	500		
George Moffat, Esq	250		$2,050
Andrew Robertson, Esq	100		

Subscription for the erection of a fire-proof Building for the Carpenter Collection of Shells, 1868.

Peter Redpath, Esq	$500	Wm. Dow, Esq	$100
William Molson, Esq	500	Thomas Rimmer, Esq	100
Harrison Stephen, Esq	100	Andrew Robertson, Esq	100
Robert J. Reekie, Esq	100	Mrs. Redpath	100
John H. R. Molson, Esq	100	Benaiah Gibb, Esq	50
Sir William E. Logan, F.R.S.	100	Honourable John Rose	50
John Molson, Esq	100		
Thos. Workman, Esq., M.P.	100		$2,180
Geo. H. Frothingham, Esq	100		

Subscription for the erection of the Lodge and Gates.

William Molson, Esq.	$100	Jame s A. Mathewson, Esq.	$100
John H. R. Molson, Esq.	100	Peter Redpath, Esq.	100
William Workman, Esq.	100	G. H. Frothingham, Esq.	100
Joseph Tiffin, Jr., Esq.	100	G. D. Ferrier, Esq.	100
Thos. J. Claxton, Esq.	100	Geo. W. Warner, Esq.	100
James Linton, Esq.	100	John Smith, Esq.	100
William McDougall, Esq.	100	Charles Alexander, Esq.	100
Charles J. Brydges, Esq.	100	J. Evans, Esq.	100
George A. Drummond, Esq.	100	Henry Lyman, Esq.	100
Thomas Rimmer, Esq.	100		
William Dow, Esq.	100		$2,100
John Frothingham, Esq.	100		

Subscriptions for the internal fittings of the Library and Museum of the Faculty of Medicine, 1872.

G. W. Campbell, A.M., M.D.	$1200	Robert Craik, M.D.	200
W. E. Scott, M.D.	200	Geo. E. Fenwick, M.D.	200
Wm. Wright, M.D.	200	Joseph M. Drake, M.D.	200
Robert P. Howard, M.D.	200	George Ross, M.A., M.D.	50
Duncan C. McCallum, M.D.	200		

Subscriptions for Library and Museum.

John Thorburn, for purchase of Books	$90	A Lady, for Museum Expenses, in 1883-4	2000
Andrew Drummond, do for Applied Science	25	Peter Redpath, Esq., for Museum Expenses, 1882, $1,000; 83, $1,000; 84, $1,000; 85, $1000; 86, $1,000	50000
T. J. Claxton, Esq., for purchase of Specimens for Museum	250	A Friend for the purchae of specimens for the Museum	1000
Mrs. H. G. Frothingham, for the arrangement of Dr. Carpenter's Collection of Mazatlan shells.	233	Further from the same	400
A Lady for Museum Expenses, in 1882	1000	do do	500
		The Graduates in Arts and Applied Science of 1885 for purchase of Books	31

Subscriptions for Apparatus.

A Lady for the purchase of Mining Models	$1000
Thos. McDougall, Esq., for the same	25
J. Livesey, Esq., through Dr. Harrington, for the same	50
Geo. Stephen, Esq., for the same	50
Charles Gibb, B.A, donation for Apparatus in Applied Science	50
Andrew Drummond, Esq., to Library Fund of Faculty of Applied Science	25
A Telescope and Astronomical Instruments, the gift of Charles T. Blackman, Esquire, of Montreal, and called after his name.	
The Local Committee for the reception (1881) of American Society of Civil Engineers. For the purchase of appliances for the department of Civil Engineering in Faculty of Applied Science.	475

Capt. Adams, Chemical Apparatus 10
J. H. Burland, B.A. Sc., Chemical Apparatus 25
Thos. J. Barron, B.A., Philosophical Apparatus 50

Subscriptions for Physiological Laboratory of Medical Faculty, 1879.

Dr. Campbell	$100	Dr. Ross	$50
Dr. Howard	100	Dr. Roddick	50
Dr. Craik	100	Dr. Buller	50
Dr. McCallum	100	Dr. Gardner	50
Dr. Drake	100	Dr. Osler	50
Dr. Godfrey	100		
Dr. McEachran, F.R.C.V.S	100		$ 950

Miscellaneous.

Hon. C. Dunkin, M.P., in aid of the chair of Practical Chemistry	$1200	T. M. Thompson, Esq., $250 for two Exhibitions in September, 1871; $200 for two Exhibitions in 1872	$450
Principal Dawson, in aid of the same	1200	Rev. Colin C. Stewart, for the "Stewart Prize in Hebrew".	60
P. Redpath, Esq., do do	226		

(Terminated in 1875.)

THE TAYLOR SCHOLARSHIP—founded in 1871, by T. M. Taylor, Esq.—Annual value, $100—terminated in 1878.

THE DAVID MORRICE SCHOLARSHIP—in the subject of Institutes of Medicine, in the Faculty of Medicine—founded in 1881—value $100.

(Terminated in 1883.)

THE BURLAND SCHOLARSHIP—founded 1882, by J. H. BURLAND, ESQ., $100 for a Scholarship in Applied Science, for three years, being $300.

PROFESSOR ALEXANDER JOHNSON—for Scholarship for 3 Sessions, terminated 1886-7 ..... $350

R. A. Ramsay, M.A., B.C.L., to defray the expenses of re-erecting the tomb of the late Hon. James McGill $150 00

(Terminated in 1885.)

XII. LIBRARY, MUSEUM AND APPARATUS FUNDS.

Wm. Molson, Esq., for Library Fund	$4000	A Friend by the Hon. F. W. Torrance	400
Wm. Molson, Esq., for Museum Fund	2000	The Local Committee of the British Association for the Advancement of Science, to found the British Association Apparatus Fund in the Faculties of Arts and Applied Science, in commemoration of the meeting of the Association in Montreal in 1884	1500
Hon. F. W. Torrance, Mental and Moral Philosophy Book Fund	1000		
Mrs. Redpath, for the endowment of the Wm. Wood Redpath Library Fund	1000		

XIII. ENDOWMENT, HELD IN TRUST BY THE BOARD OF ROYAL INSTITUTION.

The "Hannah Willard Lyman Memorial Fund," contributed by subscription of former pupils of Miss Lyman, and invested as a permanent endowment, to furnish annually a Scholarship or Prize in a "College for Women," affiliated to the University; or in classes for the Higher Education of Women approved by the University. The amount of the fund is at present $1,100.

XIV. SPECIAL COLLECTIONS OF BOOKS PRESENTED TO THE LIBRARY.

1. The Peter Redpath Collection of Historical Books—presented by Peter Redpath, Esq., of Montreal, 2272 Volumes.

2. The Robson Collection of works in Archæology and general Literature, presented by Dr. John Robson of Warrington, England, 3436 Volumes.

3. The Charles Alexander Collection of Classical Works, presented by C. Alexander, Esq., of Montreal, 221 Volumes.

4. Frederick Griffin, Esq., Q.C., Collection of Books, being the whole of his Library, bequeathed by his will, 2695 Volumes.

5. The Hon. Mr. Justice MacKay, Collection of Books, being the whole of his Library, 2007 Volumes.

6. The "T. D. King Shakespeare Collection," presented by the Hon. Donald A. Smith and W. C. MacDonald, Esq., of Montreal, being 214 Volumes.

XV. SPECIAL COLLECTIONS PRESENTED TO THE MUSEUM.

1. The Holmes Herbarium—presented by the late Andrew F. Holmes, M.D.

2. The Carpenter Collections of Shells—presented by the late P. P. Carpenter, Ph. D.

3. The Collection of Casts of Ivory Carvings issued by the Arundel Society—presented by Henry Chapman, Esq.

4. The McCulloch Collection of Birds and Mammals, collected by the late Dr. M. McCulloch, of Montreal, and presented by his heirs.

5. The Logan Memorial Collections of Specimens in Geology and Natural History, presented by the heirs of the late Sir W. E. Logan, LL.D., F.R.S.

6. The Dawson Collection in Geology and Palæontology, being the Private Collections of Principal Dawson, presented by him to the Museum.

7. The Portrait of Peter Redpath, Esq., painted by Mr. Sidney Hodges of London, and presented by Citizens of Montreal.

(See also "List of Donations to the Library and Museum," printed annually in the Calendar and Report of the Museum.)

XVI. ENDOWMENTS OF THE FACULTY OF MEDICINE.)

I. Lean Choil Endowment.

Honorable Donald A. Smith $50,000

II. Campbell Memorial Endowment.

Established to commemorate the services rendered to the Faculty during forty years by the late Dean George W. Campbell, M.D., LL.D.

Mrs. G. W. Campbell	$2000	John Rankin, Esq	$500
H. A. Allan	1500	Cantlie, Ewan & Co	500
Hon. D. A. Smith	1500	Robt. Reford	500
George Stephen, Esq	1000	J. & W. Ogilvie	500
R. B. Angus, Esq	1000	Randolph Hersey, Esq	500
George Drummond, Esq	1000	John A. Pillow, Esq	500
Alex. Murray, Esq	1000	S. Carsley, Esq	500
Robt. Moat, Esq	1000	D. C. McCallum, M.D	500
W. C. McDonald, Esq	1000	McLachlan Bros	500
A Friend	1000	S. Greenshields, Son & Co	500
Duncan McIntyre, Esq	1000	Jonathan Hodgson, Esq	500
Alex. Buntin, Esq	1000	Duncan McEachran, Esq., F.R.C.V.S	500
A. F. Gault, Esq	1000	Geo. Ross, M.D	500
M. H. Gault, Esq	1000	T. G. Roddick, M.D	500
G. W. Stephens, Esq	1000	Wm. Gardner, M.D	500
James Benning, Esq	1000	G. P. Girdwood, M.D	500
R. P. Howard, M.D	1000	G. E. Fenwick, M.D	500
Frank Buller, M.D	1000	Alex. Ramsay, Esq	500
G. B. & J. H. Burland, Esqrs.	1000	Cochrane, Cassils & Co	500
Miss Elizabeth C. Benny	1000	Joseph Hickson, Esq	500
J. C. Wilson, Esq	1000	Allan Gilmour (Ottawa)	500
Mrs. John Redpath	1000	R. W. Shepherd, Esq	500
Hon. John Hamilton	1000	Miles Williams, Esq	300
Miss Orkney	1000	Chas. F. Smithers, Esq	250
Hugh McKay, Esq	1000	John Kerry, Esq	250
Hector McKenzie, Esq	1000	A. Bamgarten, Esq	250
Thomas Workman, Esq	1000	V. R. Elmenhorst, Esq	250
Hugh McLellan, Esq	1000	W. F. Lewis, Esq	250
O. S. Wood, Esq	1000	Geo. Armstrong, Esq	250
James Burnett, Esq	500	J. M. Douglas, Esq	250
Andrew Robertson, Esq	500	H. Lyman, Sons & Sons	250
Robt. McKay, Esq	500	William Osler, M.D	250
John Hope, Esq	500	F. J. Shepherd, M.D	250
Alex. Urquhart, Esq	500	Benj. Dawson, Esq	200
E. K. & G. A. Greene, Esqrs.	500	R. Wolff, Esq	150
R. A. Smith, Esq	500	James Stuart, M.D	150
Geo. Hague, Esq	500	Mrs. Cuthbert (New Richmond, Q)	100
J. K. Ward, Esq	500	J. M. Drake, M.D	100
Warden King, Esq	500		
John Sterling, Esq	500		

H. W. Thornton, M.D. (New Richmond, Q.)	$ 100
A. T. Paterson, Esq	100
M. E. David, Esq	100
C. B. Hanvey, M.D. (Yale, B.C).	100
D. Cluness, M.D. (Nanaimo, B.C.)	100
W. Kinloch, Esq	100
Hua & Richardson	100
Hugh Paton, Esq	100
R. T. Godfrey, M.D	100
T. A. Rodger, M.D	100
W. A. Dyer, Esq	100
G. W. Wood, M.D. (Faribault, Min.)	100
A. A. Browne, M.D	100
George Wilkins, M.D	100
R. L. MacDonell, M.D	100
Joseph Workman, M.D. (Toronto)	50
Henry Luman, B.A., M.D. Campbellton, N.B	50
Griffith Evans, M.D. (Vet. Dept. Army)	25
J. J. Farley, M.D. (Belleville).	25
Henry R. Gray, Esq	25
Louis T. Marceau, M.D. (Napierville, Q.)	$ 25
R. J. B. Howard, M.D	25
T. J Alloway, M.D	25
R. F. Rinfret (Quebec)	20
Robt. Howard M.D. (St. Johns)	20
Dr. J. & D. J. McIntosh (Vankleek Hill)	20
J. E. Brouse, M.D. (Prescott)	20
J. H. McBean, M.D	15
J. C. Rattray, M.D	20
J. H. Howard, M.D. (Lachine).	10
J. W. Oliver, M.D. (Clifton, O.).	10
D. A. McDougall, M.D. (Ottawa, O.)	10
A. Pousette, M.D. (Sarnia, O.).	10
A. Ruttan, M.D. (Napanee, O.).	10
James Gun, M.D. (Durham, O.).	10
J. McDiarmid, M.D	5
W. J. Derby, M.D	5
J. Gillies, M.D	5
J. B. Benson, M.D	5
L. A. Fortier, M.D	5
J. A. McArthur, M.D	5
John Campbell, M.D. (Seaforth, O.)	5

THE GRADUATES' FUNDS.

THE FUND FOR ENDOWMENT OF THE LIBRARY.

The Graduates' Society of the University, in 1876, passed the following Resolution;—

"*Resolved*:—"That the members and graduates be invited to subscribe to "a fund for the endowment of the Libraries of the University; said fund to be "invested and the proceeds applied under the supervision of the Council of the "Society in annual additions to the Libraries; an equitable division of said pro- "ceeds to be made by the Council between the University Library and those of "The Professional Faculties."

(In terms thereof the following subscriptions have been announced to date May 1st, 1883,) they are payable in one sum, or in instalments as subscribers have elected.

Alphabetically Arranged.

Baynes, O'Hara, B.C.L.	$ 50
Bethune, M.B., M.A., B.C.L.	50
Blackader, Alex. D., B.A., M.D.	50
Burland, J. H., B. App. Sc.	120
Browne, A. A., B.A., M.D.	50
Cline, J. D., B.A., M.D	25
Cushing, Lemuel, LL.D., B.C.L.	25
Dougall, J. R., M.A	$ 50
Ells, R. W., M.A	50
Empson, Rev. J., M.A	25
Gardner, Wm., M.D	100
Gibb, Charles, B.A	50
Gilman. F. E., LL.D., B.C.L.	100
Gould, C. H., B.A	100

THE GRADUATES' FUNDS—*Continued.*

Hall, J. S., Jr., B.A., B.C.L.	$ 50	Macleod, C. H., Ma.E.	$ 50
Hall, Rev. W., M.A.	10	Macmaster, D., B.C.L.	100
Harrington, B. J., B.A., Ph.D.	50	Marler, Wm. DeM., B.A., B.C.L.	125
Holton, Edward, B.C.L.	100	Osler, Wm., M.D.	100
Hutchinson, M., B.C.L.	5	Ramsay, R. A., M.A., B.C.L.	100
Keller, F. J., B.C.L	25	Rexford, Rev. E. I., B.A.	50
Kelley, F. W., B.A., Ph.D.	100	Robertson, Alex., B.A.	100
Laing, Rev. R., M.A.	100	Robins, S. P., LL.D.	50
Lyman, F. S., B.A., B.C.L.	50	Roddick, T. G., M.D.	100
Lyman, H. H., M.A.	100	Ross, George, M.A., M.D.	100
Molson, Wm., M.D.	100	Shepherd, J. F., M.D.	100
MacKenzie, Fred., B.C.L.	100	Torrance, J. F., B.A., B. A. Sc.	100
Maclaren, J. J., M.A., B.C.L.	100	Trenholme, N. W., M.A., B.C.L.	100
McCord, D. R., M.A., B.C.L.	100		
McGregor, James, LL.D.	80	Total to date	$3,090

THE DAWSON PRINCIPALSHIP FOUNDATION.

The Graduates' Society of the University, in 1880, and in commemoration of the completion by Dr. Dawson of his twenty-fifth year as Principal, resolved to raise, with the assistance of their friends, a Fund towards the Endowment of the Principalship, under the above name.

Details of the scheme can be had from the Treasurer, Wm. Molson, Esq., M.D. The following subscriptions have been announced to date May 1st, 1883. They are payable in one sum, in instalments, without interest, or with interest till payment of capital, as subscribers have elected.

Alphabetically Arranged.

Abbott, H., B.C.L.	$ 60	Leet, S. P., B.C.L.	100
Archibald, H., B. A. Sc.	20	McCormick, D., B.A.L.	100
Bethune, M. B., M.A., B.C.L.	50	McLennan, J. S., B.A.	100
Carter, C. B., B.C.L.	100	McGibbon, R. D., B.A., B C.L.	100
Cruickshank, W. G., B.C.L.	100	McGoun, A., jr., B.A., B.C.L.	50
Dougall, J. R., M.A.	250	Ramsay, R. A., B.A., B.C.L.	50
Dawson, W. B., M.A , Ma.E.	50	Stewart, J., M.D.	60
Gibb, C , B.A.	100	Stewart, D. A., B. A. Sc.	20
Hutchison, M., B.C.L	400	Stephens, C. H., B.C.L.	100
Hall, Rev. Wm., M.A.	100	Spencer, J. W., B.A. Sc., Ph D.	50
Hall, J. S., jr., B.A., B.C.L.	100	Tait, M. M., B.C.L.	100
Harrington, B. J., B A., Ph.D.	50	Taylor, A. D., B.A., B.C.L.	100
Kirby, J., LL.D., D.C.L.	50	Trenholme, N. W., M.A., B.C.L.	400
Krans Rev. G. H., M.A., LL.D.	100		
Lighthall, W. D., B.A., B.C.L.	100	Total to date	$3,010
Lyman, H. H., M.A.	100		
Lyman, A. C., M.A., B.C.L.	50		

ACADEMICAL YEAR 1887-88.

SEPTEMBER, 1887.

1 Thursday	Normal School opens.
2 Friday	
3 Saturday	
4 SUNDAY	
5 Monday	
6 Tuesday	
7 Wednesday	Meeting of Normal School
8 Thursday	Committee.
9 Friday	
10 Saturday	
11 SUNDAY	
12 Monday	
13 Tuesday	
14 Wednesday	
15 Thursday	Mat. and Sup. Exn's in Classics Exhib. and Scholarship Exam.
16 Friday	Mat. and Sup. Ex'ns in Math's
17 Saturday	Exhib. & Scholarship Exam.
18 SUNDAY	
19 Monday	Mat. & Sup. Ex'ns in English, Logic, Men. and Mor. Phil. Exhib. and Sch. Exm'ns.
20 Tuesday	Mat. & Sup., Ex'ns in Modern Lang's and Nat. Sc.; Exhib. and Sch. Exam'ns.
21 Wednesday	Lect's in Arts and App. Science begin. Faculties meet.
22 Thursday	
23 Friday	Matric. Exams. in Med. Meeting of Faculty of Arts.
24 Saturday	Meeting of Governors, Register
25 SUNDAY	Med. Fac. opens.
26 Monday	
27 Tuesday	
28 Wednesday	Summer Essays in Applied Sc.
29 Thursday	given in.
30 Friday	

OCTOBER, 1887.

1 Saturday	
2 SUNDAY	
3 Monday	Session of Medical and Law Faculties begins.
4 Tuesday	Meeting of Fac. of App. Sec.
5 Wednesday	Meeting Nor. Sch. Committee.
6 Thursday	Founder's Birthd'y.
7 Friday	The William Molson Hall opened 1862. Meeting Faculty of Arts.
8 Saturday	
11 SUNDAY	
10 Monday	
11 Tuesday	
12 Wednesday	
13 Thursday	
14 Friday	Univ. Athletic Sports.
15 Saturday	
16 SUNDAY	
17 Monday	
18 Tuesday	
19 Wednesday	
20 Thursday	
21 Friday	Meeting of Faculty of Arts.
22 Saturday	Meeting of Governors.
23 SUNDAY	
24 Monday	Meeting of Museum Com.
25 Tuesday	Meeting of Library Com.
26 Wednesday	Regular Meeting of Corporation
27 Thursday	School Examiners appointed.
28 Friday	Reps. on Schol'ship & Exh.
29 Saturday	Accounts audited.
30 SUNDAY	
31 Monday	

NOVEMBER, 1887.

1 Tuesday	Meeting of Fac. App. Science.
2 Wednesday	Meeting Normal School Com.
3 Thursday	
4 Friday	Meeting of Faculty of Arts.
5 Saturday	
6 SUNDAY	
7 Monday	
8 Tuesday	
9 Wednesday	
10 Thursday	
11 Friday	
12 Saturday	
13 SUNDAY	
14 Monday	
15 Tuesday	
16 Wednesday	
17 Thursday	
18 Friday	Meeting of Faculty of Arts.
19 Saturday	
20 SUNDAY	
21 Monday	
22 Tuesday	
23 Wednesday	
24 Thursday	
25 Friday	
26 Saturday	Meeting of Governors
27 SUNDAY	
28 Monday	
29 Tuesday	
30 Wednesday	

DECEMBER, 1887.

1 Thursday	
2 Friday	Meeting of Faculty of Arts.
3 Saturday	
4 SUNDAY	
5 Monday	
6 Tuesday	Meeting of Faculty of App. Sci.
7 Wednesday	Meeting of Nor. Sch. Comm.
8 Thursday	
9 Friday	
10 Saturday	Exam. Bot. Med. Studs.
11 SUNDAY	
12 Monday	Lect's in Arts and Ap. Sc. end.
13 Tuesday	
14 Wednesday	Christmas Examinations begin.
15 Thursday	Exams. in Med. Lects. in Med. close. Exam's in Law begin.
16 Friday	Meeting of Faculty of Arts.
17 Saturday	Examinations in Law. Meeting of Governors.
18 SUNDAY	
19 Monday	Examinations in Law.
20 Tuesday	
21 Wednesday	Examinations in Law.
22 Thursday	Christmas Vacation begins.
23 Friday	
24 Saturday	
25 SUNDAY	Christmas-Day.
26 Monday	
27 Tuesday	
28 Wednesday	
29 Thursday	
30 Friday	
31 Saturday	

JANUARY, 1888.

1 SUNDAY	
2 Monday	
3 Tuesday	
4 Wednesday	Meeting of Nor. Sc. Comm. Christmas Vacation ends.
5 Thursday	Lectures in Arts, Law, Med, & App. Sci. recommence, Meeting of Fac. of App. Sci.
6 Friday	Meeting of Fac. Arts.
7 Saturday	
8 SUNDAY	
9 Monday	
10 Tuesday	
11 Wednesday	
12 Thursday	
13 Friday	
14 Saturday	
15 SUNDAY	
16 Monday	
17 Tuesday	
18 Wednesday	
19 Thursday	
20 Friday	Meeting of Faculty of Arts.
21 Saturday	
22 SUNDAY	
23 Monday	Meeting of Museum Com.
24 Tuesday	Meeting of Library Com.
25 Wednesday	Regular Meet'g of Corporation. Examiners appointed. Annual Report to Visitor.
26 Thursday	
27 Friday	
28 Saturday	Meeting of Governors.
29 SUNDAY	
30 Monday	Theses for M.A.&LL.D. to be sent in to the Vice-Dean of Faculty of Arts.
31 Tuesday	

FEBRUARY, 1888.

1 Wednesday	Theses for Deg. of B.C.L. to be sent in to Dean of Fac. of Law Meeting of Nor. Sch. Comm
2 Thursday	
3 Friday	Meeting of Examiners. Meet- of Faculty of Arts.
4 Saturday	
5 SUNDAY	
6 Monday	
7 Tuesday	Meeting of Fac. App. Science.
8 Wednesday	
9 Thursday	
10 Friday	
11 Saturday	
12 SUNDAY	
13 Monday	
14 Tuesday	
15 Wednesday	No lectures.
16 Thursday	
17 Friday	Meeting of Faculty of Arts. Supplemental Exam's in Arts and Applied Science.
18 Saturday	
19 SUNDAY	
20 Monday	
21 Tuesday	
22 Wednesday	
23 Thursday	
24 Friday	
25 Saturday	Meeting of Governors.
26 SUNDAY	
27 Monday	
28 Tuesday	Theses for Degree of B.C.L. to be sent in to Dean of Faculty.
29 Wednesday	Meeting of Nor. Sc. Com.

MARCH, 1888.

1 Thursday	Theses for degree of B.C.L to be sent in to Dean of Faculty.
2 Friday	Meeting of Faculty of Arts.
3 Saturday	
4 SUNDAY	
5 Monday	
6 Tuesday	Meeting of Fac. of Ap. Science.
7 Wednesday	Meeting of Nor. Sc. Com.
8 Thursday	
9 Friday	
10 Saturday	
11 SUNDAY	
12 Monday	
13 Tuesday	
14 Wednesday	
15 Thursday	Lectures in Medicine end.
16 Friday	Meeting of Fac. of Arts.
17 Saturday	Examinations in Law, and Botany Med. Fac.
18 SUNDAY	
19 Monday	Exam's in Med. begin.
20 Tuesday	Meeting Fac. App. Sci.
21 Wednesday	
22 Thursday	
23 Friday	Meeting of Fac. of Arts. Reports of Attendance on Lects. Examinations in Law.
24 Saturday	Meeting of Governors.
25 SUNDAY	
26 Monday	Examinations in Law.
27 Tuesday	
28 Wednesday	Examinations in Law.
29 Thursday	Lects. in Arts and Ap. Sc. end.
30 Friday	Good Friday. Easter Vcn. begins
31 Saturday	Convocation for Degrees in Med.

APRIL, 1888.

1 SUNDAY	Easter Day.
2 Monday	
3 Tuesday	Easter vacation ends. Meeting of Fac. of Ap. Science
4 Wednesday	Meeting of Nor. Sc. Committee
5 Thursday	
6 Friday	
7 Saturday	
8 SUNDAY	
9 Monday	Sumr. Session Med. Fac. begin
10 Tuesday	
11 Wednesday	Meeting of Examiners.
12 Thursday	
13 Friday	Meeting of Fac. of Arts.
14 Saturday	
15 SUNDAY	
16 Monday	
17 Tuesday	
18 Wednesday	
19 Thursday	
20 Friday	
21 Saturday	Meeting of Governors.
22 SUNDAY	
23 Monday	Meeting of Museum Committee
24 Tuesday	Meeting of Library Committee
25 Wednesday	Regular meeting of Corporation
26 Thursday	
27 Friday	Meeting of Examiners. & of Fa Arts. Declaration of result of Exam's.
28 Saturday	Convocation for Degrees in La and Applied Science.
29 SUNDAY	
30 Monday	Convocation for Degrees Arts.

MAY, 1888.

1 Tuesday	Exams. in Nor. School begin.
2 Wednesday	Meeting Nor. Sch. Committee.
3 Thursday	
4 Friday	
5 Saturday	
6 SUNDAY	
7 Monday	
8 Tuesday	
9 Wednesday	Meeting of Examiners for Sch. Examinations.
10 Thursday	
11 Friday	
12 Saturday	
13 SUNDAY	
14 Monday	
15 Tuesday	
16 Wenesday	
17 Thursday	
18 Friday	
19 Saturday	
20 SUNDAY	Whit-Sunday.
21 Monday	
22 Tuesday	
23 Wednesday	
24 Thursday	Queen's Birthday.
25 Friday	
26 Saturday	Meeting of Governors.
27 SUNDAY	
28 Monday	
29 Tuesday	
30 Wednesday	
31 Thursday	Normal Sch. closes for Summer Vacation.

JUNE, 1888.

1 Friday	Examinations for Certificate of Associate in Arts begin.
2 Saturday	
3 SUNDAY	
4 Monday	
5 Tuesday	
6 Wednesday	Normal School Committee.
7 Thursday	
8 Friday	
9 Saturday	
10 SUNDAY	
11 Monday	
12 Tuesday	
13 Wednesday	
14 Thursday	
15 Friday	
16 Saturday	Declaration of results of School Examinations.
17 SUNDAY	
18 Monday	
19 Tuesday	
20 Wednesday	
21 Thursday	
22 Friday	
23 Saturday	Meeting of Governors.
24 SUNDAY	
25 Monday	Meetingof Museum Committee.
26 Tuesday	Meeting of Library Committee.
27 Wednesday	Regular Meeting of Corporat'n.
28 Thursday	Report of Normal School.
29 Friday	
30 Saturday	Summr. Sessn. Med. Fac. ends.

JULY, 1888.

1 SUNDAY	
2 Monday	
3 Tuesday	
4 Wednesday	
5 Thursday	
6 Friday	
7 Saturday	
8 SUNDAY	
9 Monday	
10 Tuesday	
11 Wednesday	
12 Thursday	
13 Friday	
14 Saturday	
15 SUNDAY	
16 Monday	
17 Tuesday	
18 Wednesday	
19 Thursday	
20 Friday	
21 Saturday	
22 SUNDAY	
23 Monday	
24 Tuesday	
25 Wednesday	
26 Thursday	
27 Friday	
28 Saturday	
29 SUNDAY	
30 Monday	
31 Tuesday	

AUGUST, 1888.

1 Wednesday	
2 Thursday	
3 Friday	
4 Saturday	
5 SUNDAY	
6 Monday	
7 Tuesday	
8 Wednesday	
9 Thursday	
10 Friday	
11 Saturday	
12 SUNDAY	
13 Monday	
14 Tuesday	
15 Wednesday	
16 Thursday	Peter Redpath Museum opened 1882.
17 Friday	
18 Saturday	
19 SUNDAY	
20 Monday	
21 Tuesday	
22 Wednesday	
23 Thursday	
24 Friday	
25 Saturday	
26 SUNDAY	
27 Monday	
28 Tuesday	
29 Wednesday	
30 Thursday	
31 Friday	

FACULTY OF ARTS.

EXHIBITION, SCHOLARSHIP, &c., EXAMINATIONS, SEPTEMBER, 1887.

Day.	Date	First Year.	Second Year.	Third Year.	Hours.
Thursday.	15	Greek,	Greek.	Greek.	9 to 12
"	15	Latin.	Latin.	Latin Prose Comp.	2 to 5
"	15			Mathematics.	9 to 12
Friday.	16	Mathematics.	Mathematics.	Latin.	9 to 12
"	16			Mathematics.	9 to 12
"	16			Botany.	9 to 12
"	16			Ancient History.	2 to 5
"	16			Botany.	2 to 5
Saturday.	17		Mathematics.	Mathematics.	9 to 12
			English.		2 to 5
Monday.	19	English.	English.	English.	9 to 12
"	19			Logic.	9 to 12
"	19	English.		English.	2 to 5
"	19		Chemistry.	Chemistry.	2 to 5
Tuesday.	20			Mathematics.	9 to 12
"	20			Botany.	9 to 12
"	20		French.	French.	9 to 12
"	20	Grammar and Comp. (Classics.)	General Paper. (Classics.)	English Composition	2 to 5

CHRISTMAS EXAMINATIONS, DECEMBER, 1887.

Day.	Date	First Year.	Second Year.	Third Year.	Fourth Year.
Thursday.	15	Latin.	Latin.	Mechanics.	Astronomy.
Friday.	16	Greek.	Botany.	Greek. Botany A.M. & P.M	
Saturday.	17	Mathematics.	Psychology.	Latin	Moral Philosophy.
Monday.	19	Chemistry.		Zoology.	Geology.
Tuesday.	20	French, A.M.	French, A.M.		
"	20	German, P.M.	German, P.M.		
"	20	Hebrew, P.M.			
Wednesday.	21	English.			

FACULTY OF ARTS.

SESSIONAL AND HONOUR EXAMINATIONS, 1888.

Date.	Day.	First Year.		Second Year.		Third Year.		Fourth Year.	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
March 29	Thurs.		Hebrew.		Hebrew.		Hebrew.		Hebrew.
April 4	Wed.	.....	.....	.....	.....	.....	.....	B.A. Honours.	
" 5	Thu.	Greek.	.....	Greek.	.....	Mechanics.	.....	Ethics.....	Ethics.
" 6	Fri.	Latin.	Ancient History.	Latin.	Composition.	Latin.		Latin.	Latin.
" 9	Mon.	English.	.....	English.	English.	Ex. Physics.	English.	Ex. Physics.	History.
" 10	Tue.								
" 11	Wed.	Geometry and Arithmetic.....		Mathematics.....		Greek.....		Math. Physics and B.A. Honours.	
" 12	Thurs.	Trigonometry and Algebra.....		Mathematics.....		Astronomy and Optics.....		Math. Physics and B.A. Honours.	
" 13	Fri.	French.....		French.....		Metaphysics.....		Geology, A.M. & P.M.	
" 14	Sat.								
" 15	Sun.								
" 16	Mon.	Chemistry.....		.....		.....	Zoology, P.M.	Greek, A.M.	History, P.M.
" 17	Tues.	Meeting of Examiners.		Logic.....					
" 18	Wed.	.....		Botany,.....		French.....		French B.A. Honours.	
" 19	Thurs.	German.....		German.....		German.		German.	
" 20	Fri.								
" 21	Sat.	Meeting of Examiners.							
" 22	Sun.								
" 23	Mon.	Honour Examinations.		Honour Examinations.		Honour Examinations.		B.A. Honours.	
" 24	Tues.	Honour Examinations.		Honour Examinations.		Honour Examinations.		B.A. Honours.	
" 25	Wed.	Meeting of Examiners.	Meeting of Examiners.			Meeting of Corporation.			
" 26	Thurs.		Meeting of Examiners.						
" 27	Fri.	Declaration of results.							
" 30	Mon.		Meeting of Convocation.						

FACULTY OF APPLIED SCIENCE.

EXAMINATIONS.—1887-88.

CHRISTMAS, 1887.

The days of the several Examinations will be announced by the Faculty during the Session.

SESSIONAL, 1888.

Days.	First Year.	Second Year.	Third Year.	Fourth Year.
March				
29 Thurs.	Freehand Drawing.	Descrpt've Geomet'y	Descrp've Geometry	
30 Frid.	Good Friday.			
31 Sat.		Materials.	Materials.	Materials.
April.				
2 Mon.		Essay.	Essay.	Essay.
3 Tues.		Mechanism.	Theory of Structures	Theory of Structures.
4 Wedn.	German.	German.	French.	Mineralogy (adv).
5 Thurs.	Practical Chemistry.		Theory of Structures	Theory of Structures.
6 Frid.		R'y., Plant and Rolling Stock.	R'y., Plant and Rolling Stock.	R'y., Plant and Rolling Stock.
7 Sat.		Mechanical Work.	Mechanical Work.	Mach'y & Millwork.
9 Mond.		Exp. Physics.	Exp. Physics.	Theory of Structures.
10 Tues.				
11 Wedn.	Mathematics.	Mathematics.	Mathematics.	Geology (adv.) / Theory of Struct.
12 Thurs.		Theoretical Chem'y.	Theoret'l Chem'y. / Mining.	Geology (adv.)
13 Frid.		Surveying.	Surveying. / Geom'y of Mach'y.	Steam.
14 Sat.	French.	French.	Geology.	Metallurgy.
16 Mon.	Chemistry.	Chemistry. / Zoology (p.m.)	Chemistry.	Hydraulics.
17 Tues.	Mathematics.	Mathematics.	Mathematics.	
18 Wedn.		Botany.	Mach'y & Millwork.	Mach'y & Millwork.
19 Thurs.		Practical Chemistry.	Pract. Chemistry.	Assaying.
20 Frid.	Mathematics.	Mathematics.	Mathematics.	Steam (adv.)
21 Sat.				
23 Mon.			Mineralogy.	Petrography. / Hydraulics (adv.)
24 Tues.			Mineralogy.	Geology adv.
25 Wedn.				
26 Thurs.				
27 Friday.				
28 Sat.				

Faculty of Arts.

THE PRINCIPAL (Ex-officio).

Professors :—MARKGRAF.
DAWSON.
JOHNSON.
CORNISH.
DAREY.
MURRAY.
HARRINGTON.

Professors :—MOYSE.
PENHALLOW.
COUSSIRAT.

Assistant Prof. :—EATON.

Lecturers :—CHANDLER.
LAFLEUR.

Dean of the Faculty :—ALEXANDER JOHNSON, LL.D.

Honorary Librarian :—REV. GEORGE CORNISH, LL.D.

[CONTENTS.—*Matriculation*, &c., § I. ; *Exhibitions*, &c., § II. ; *Course of Study*, § III. ; *Examinations, Degrees*, &c., § IV. ; *Exemptions*, &c., § V. *Medals*, &c., § VI. ; *Licensed Boarding Houses*, § VII. ; *Attendance and Conduct*, § VIII. ; *Library*, § IX. ; *Peter Redpath Museum*, § X. ; *Fees*, &c., § XI. ; *Courses of Lectures*, § XII.]

The next Session of this Faculty will begin on September 15th, 1887, and will extend to April 30th, 1888.

§ I. MATRICULATION AND ADMISSION.

1. UNDERGRADUATES.—Candidates for Matriculation as Undergraduates are required to present themselves to the Dean of the Faculty on the 15th of September, for examination ; they may, however, enter after the beginning of the Session, if, on examination, found qualified to join the classes.

(*a*) The subjects of examination for entrance into the First Year are Classics, Mathematics and English.

Examination for Entrance into the First Year.

(*Junior Matriculation.*)

In Classics.—*Greek.*—Xenophon, Anabasis, Book I.; or, Homer, Iliad, Book I.; Greek Grammar.

Latin.—Cicero, Orations I. and II., against Catiline; or, Virgil, Æneid, Book I.; Latin Grammar.

In Mathematics.—Arithmetic; Algebra, to Simple Equations (inclusive); Euclid's Elements, Books, I., II., III.

In English.—Writing from Dictation. A paper on English Grammar *including Analysis.* A paper on the leading events of English History.

An equivalent amount of other books or other authors in Latin and Greek than those named may be accepted by the Examiners on application made through the Professor of Classics.

[Associates in Arts who, at their special Examination have passed in Latin, Greek, Algebra and Geometry, are not required to present themselves for the Matriculation Examination.]

An *Advanced Examination* in any one or more of the subjects of the First Year will be held for such of the candidates as desire it. Candidates who pass creditably in this will be entitled to such exemption from the Lectures and from the Christmas Examinations of the First Year as the Faculty may determine. For the Advanced Examination in Classics two authors in Latin and two in Greek will be required, and the books fixed (see below) must be taken.

Candidates for the Advanced Examination must send notice to the Dean of their intention before the day of Examination, stating the subjects of the First Year and the extent of reading in each they purpose to submit.

Partial or Occasional Students (see below) in the First Year, who pass the April Sessional Examinations in one or more subjects, will, if Candidates for Undergraduate standing in the First Year in the following September, be allowed to count these as Advanced Examinations under the above rule.

The *Courses in some of the subjects for Advanced Matriculation* are as follows:—

Classics.

Greek.—Xenophon, Anabasis, Book I.; Homer, Iliad, Book VI.

Latin.—Cicero, Orations I and II against Catiline; Virgil, Æneid, Book II.

A paper on Greek and Latin Grammar, and Latin Prose Composition (Arnold's Bradley, to p. 155.)

Mathematics.

Candidates who pass a satisfactory Examination in the Arithmetic and Euclid of the First Year (see course for entrance into Second Year) will be exempt from lectures up to Christmas and from the Christmas Examination.

Candidates who, in addition to the above, pass a satisfactory Examination in Algebra and Trigonometry, will be exempt from lectures altogether in these subjects in the First Year.

Candidates who pass a satisfactory Examination on Morley's First Sketch of English Literature, Celtic period to Elizabethan period (inclusive), will be exempt from the lectures on Literature during the First Year.

(*b*) Candidates not matriculated in the University, or Partial Students of the First Year, may be admitted to the standing of students of the Second Year, provided that they pass the Sessional Examinations of the First Year, or an Examination in the following subjects at the beginning of the Second Year:—

Examinations for Entrance into the Second Year.

(*Senior Matriculation.*)

In Classics.—*Greek.*—Homer, Iliad, Book VI.; Xenophon, Anabasis, Book I.; Grammar and Prose Composition.

Latin.—Virgil, Æneid, Book VI.; Cicero, Orations IV. against Catiline; Grammar and Prose Composition.

[An equivalent amount of other books or other authors in Latin and Greek than those named above may be accepted by the Examiners for entrance into the Second Year on application made through the Professor of Classics.]

In Mathematics.—

Euclid.—Books I., II., III., IV., VI., with defs. of Book V. (omitting Propositions 27, 28, 29, of Book VI.)

Algebra.—To end of Quadratic Equations. (Colenso's Alg.)

Trigonometry.—Galbraith and Haughton's Trigonometry, Chaps. 1, 2, 3, 4, 6, to beginning of numerical solution of plane triangles.

Arithmetic.—Elementary rules, Proportion, Interest, Discount, &c., Vulgar and Decimal Fractions, Square Root.

In English Literature.—Writing from Dictation, English Grammar, including Analysis, English Composition, British History (Collier).

In French.—French Grammar; or (instead of French) *German*—in which knowledge sufficient to enable the Candidate to join the regular class will be required.

In Chemistry.—The Chemistry of the non-metallic Elements, or of the more common metals.

[*Note.*—Candidates unable to pass in French or German are not excluded; but they are required to begin German, and to continue the study of it for two years.

Candidates unable to pass in Chemistry are required to attend such of the lectures in the subject as are open to them, and to pass an examination at the end of the Second Year.]

(*c*) *Students of other Universities* may be admitted, on the production of Certificates, to a like standing in this University, after examination by the Faculty.

2. PARTIAL STUDENTS.—Candidates for Matriculation as Partial Students, taking three or more Courses of Lectures, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty.

3. OCCASIONAL STUDENTS.—Persons desirous of taking one or two Courses of Lectures, as Occasional Students, may apply to the Dean for entry in his Register, and may procure from the Secretary tickets for the Lectures they desire to attend.

Note.—Every Student is expected to present, on his entrance, a written intimation from his parent or guardian of the name of the minister of religion under whose care and instruction it is desired that the Student should be placed, who will thereupon be invited to put himself in communication with the Faculty on the subject. Failing such intimation from his parent or guardian, the Faculty will endeavor to establish befitting relations.

4. Every matriculated student is required to sign in the Matriculation register the following:—

DECLARATION.

"I hereby declare that I will observe the statutes, rules and ordinances of "this University of McGill College to the best of my ability."

SUMMARY

Of instructions for Candidates for Matriculation or Admission.

Candidates are required:—1. To present themselves to Dean, and fill up a form of application for admission. (§I.)

2. To pass the required examinations (§I.)

3. To procure tickets from the Registrar (§XI.), and, if not occasional Students, to sign the Matriculation Register.

4. To present their tickets to the Dean. (§XI.)

5. To provide themselves with the Academic dress. (§VIII.)

§ II. SCHOLARSHIPS AND EXHIBITIONS.

General Regulations.

1. A Scholarship is tenable for *two* years. An Exhibition for *one* year.

2. Scholarships are open for competition to Students who have passed the University Intermediate Examination, provided that not more than three sessions have elapsed since their Matriculation; and also to candidates who have obtained what the Faculty may deem equivalent standing in some other University, provided that application be made before the end of the Session preceding the Examination.

3. Scholarships are divided into two classes :—[1] *Science* Scholarships; [2] *Classical and Modern Language* Scholarships. The subjects of Examination for each are as follows :—

Science Scholarships.—Differential and Integral Calculus; Analytic Geometry; Plane and Spherical Trigonometry; Higher Algebra and Theory of Equations; Botany; Chemistry; Logic. (For subdivision see below.)

Classical and Modern Language Scholarships.—Greek; Latin; English Composition; English Language, Literature, and History; French.

4. Exhibitions are assigned to the First and Second Years.

First Year Exhibitions are open for competition to candidates for entrance into the First Year.

Second Year Exhibitions are open for competition to Students who have passed the First Year Sessional Examinations, provided that not more than two Sessions have elapsed since their Matriculation; and also to candidates for entrance into the Second Year.

The subjects of Examination are as follows :—

First Year Exhibtions.—Classics, Mathematics, English.

Second Year Exhibitions.—Classics, Mathematics, English Language and Literature, Chemistry and French.

5. The First and Second Year Exhibition Examinations will, for Candidates who have not previously entered the University, be regarded as Matriculation Examinations.

6. No student can hold more than one Exhibition or Scholarship at the same time; but four of the First Year Exhibitioners will be granted exemption from the Sessional fees throughout their College Course, under Presentation Scholarships from the Governor General. (See below.)

7. Exhibitions and Scholarships will not necessarily be awarded to the best answerers at the Examinations. Absolute merit will be required.

8. If in any one College Year there be not a sufficient number of Candidates showing absolute merit, any one or more of the Exhibitions or Scholarships offered for competition may be transferred to more deserving Candidates in another year.

9. A successful Candidate must, in order to retain his Scholarship or Exhibition, proceed regularly with his College Course to the satisfaction of the Faculty.

10. The annual income of the Scholarships or Exhibitions will be paid in four instalments, viz. :—In October, December, February and April, about the 20th day of each month.

11. The Examinations will be held at the beginning of every session.

There are at present sixteen Scholarships and Exhibitions :—

THE JANE REDPATH EXHIBITION, founded by Mrs. Redpath, of Terrace Bank, Montreal :—value $100 yearly, open to both men and women.

TEN MCDONALD SCHOLARSHIPS AND EXHIBITIONS, founded by W. C. McDonald, Esq., Montreal :—value, $125 each, yearly.

THE CHARLES ALEXANDER SCHOLARSHIP, founded by Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects : —value, $120 yearly.

THE GEORGE HAGUE EXHIBITION, given by George Hague, Esq., Montreal, for the encouragement of the study of Classics :—value, $125 yearly.

THE MAJOR H. MILLS SCHOLARSHIP, founded by bequest of the late Major Hiram Mills :—value, $100 yearly.

THE BARBARA SCOTT SCHOLARSHIP, founded by the late Miss Barbara Scott or the encouragement of the study of the Classical languages and literature :— value, $100 to $120 yearly.

EXHIBITIONS AND SCHOLARSHIPS OFFERED FOR COMPETITION AT THE OPENING OF THE SESSION, SEPT., 1887.

To Students entering the First Year, three Exhibitions of $125, *and one* $100.

Subjects of Examination :—

GREEK.—Homer, Iliad, bk. XXII.; Xenophon, Anabasis, bk. I. ; Demosthenes, Aphobus I. and II.

LATIN.—Cicero, in Catilinam, Orat. I. ; Virgil, Æneid, bk. I. ; Cæsar, Bellum Britannicum (IV., 20 to V.—23, Bell. Gall.)

A paper on Greek and Latin Grammar.

Text-Books.—Hadley's Elements of Greek Grammar. Arnold's Greek Prose Composition, Exercises 1 to 25. Dr. Wm. Smith's Smaller Latin Grammar, and Principia Latina, Part IV.

Mathematics—Euclid, bks. I., II., III., IV.; Algebra to end of Harmonical Progression (Colenso) , Arithmetic.

English.—English Grammar and Composition.—(Mason's Grammar, omit Derivation and Appendix.)

The First Year Exhibitions will be awarded to the best answerers in the above course, provided there be absolute merit.

But in subsequently distributing the Exhibitions of higher value among the successful candidates, answering in the following subjects will be taken into account also :—

1. A re-translation into Latin of an English version of some passage from one of the easier Latin Prose writers. (for specimens see Smith's Principia Latina, Part V.)

2. Euclid, Book VI. (omitting Props. 27, 28, 29), with Defs. of Book V.

3. English .—An Examination upon one of Shakespeare's plays. For 1887.—Coriolanus. 1888.—Julius Cæsar.

To Students entering the Second Year, three Exhibitions of $125, *and one of* $100.

Subjects of Examination :—

Greek.—Homer, Odyssey, bk. VI.; Herodotus, bk. III., Chaps. 1 to 67; Demosthenes, Olynthiacs I. and II.

Latin.—Virgil, Georgics, bk. II.; Horace, Odes, bk. III.; Livy, bk. XXII., Chaps. 1-23; Cicero, In Cæcilium.

Greek and Latin Prose Composition.

A paper on Grammar and History.

Text-Books.—Dr. William Smith's History of Greece. Liddell's History of Rome. Hadley's Greek Grammar. Smith's Student's Latin Grammar. Arnold's Greek Prose Composition. Smith's Principia Latina, Parts IV. and V.

Mathematics.—The Mathematics (Ordinary and Honour) of First Year.

English Literature.—Mason's Grammar. Shakespeare, *As you Like it.* Trench, *Study of Words.*

Chemistry.—Nichol's Abridgment of Elliot and Storer's Manual, as far as p. 208.

French.—Darey, Principes de Grammaire française; Lafontaine, les Fables, livres I. and II.; Molière, le Bourgeois gentilhomme.

To Students entering the Third Year, Three Scholarships of $125, *and one of* $120, *tenable for two Years.*

One of these is offered in Mathematics and Logic, and one in Natural Science and Logic, as follows :—

1. *Mathematics.*—Differential Calculus (Williamson, Chaps. 1, 2, 3, 4, 7, 9; Chap. 12, Arts. 168-183 inclusive; Chap. 17, Arts. 225-242 inclusive). Integral Calculus (Williamson, Chaps. 1, 2, 3, 4, 5; Chap. 7, Arts 126-140 inclusive; Chap. 8, Arts. 150-156 inclusive; Chap. 9, Arts. 168-176 inclusive). Analytic Geometry (Salmon's Conic Sections, subjects of Chaps. 1-13 (omitting Chap. 8), with part of Chap. 14. Hind's Plane and Spherical Trigonometry. Salmon's Modern Higher Algebra (first four chapters). Todhunter's Theory of Equations (selected course).

Logic, as in Jevon's Elementary Lessons on Logic.

2. *Natural Science.*—*Botany*, as in Gray's Structural and Systematic Botany. *Canadian Botany*, including a practical acquaintance with all the orders of Phænogams and Acrogens. *Chemistry*, Nichol's abridgment of Eliot and Storer's Manual of Chemistry.

Logic, as in Jevon's Elementary Lessons on Logic.

Two will be given on an Examination in Classics and Modern Languages, as follows :—

Classics.—*Greek.*—Euripides, Medea; Demosthenes, the Olynthiacs; Xenophon, Hellenics, Book I.; Herodotus, Book VIII.; Thucydides, Book VI. *Latin.*—Horace, Satires, Book I., and Epistles, Book I.; Virgil, Georgics, Book I.; Terence, Adelphi; Tacitus, Annals, Book I.; Pliny, Select Letters (Pritchard and Bernard; Clarendon Press Series). Greek and Latin Prose Composition.

History.—*Text-books.*—Rawlinson's Manual of Ancient History; Smith's Student's Greece; Liddell's Rome.

English Language and Literature.—Spalding's English Literature (Chap. VI., Part III., to end of book); Shakespeare, Tempest; Milton's Paradise Lost, books I. and II.; Trench, Study of Words.

English Composition.—(High marks will be given for this subject.)

French.—Racine, Britannicus; Molière, les Femmes savantes. French Grammar. Les Ecrivains célèbres de la France :—Bonnefon. Translation from English into French.

Classical Subjects for Exhibitions, September, 1888.

FIRST YEAR.—*Greek.*—Homer, Iliad, Bk. IV.; Xenophon, Anabasis, Bk. I.; Demosthenes, Philippics I. and II.

Latin.—Virgil, Æn. Bk. I.; Horace, Odes, Bk. I.; Cicero, In Catilinam Orat. I.

SECOND YEAR.—*Greek.*—Homer, Odyssey, Bk. VI.; Demosthenes, Olynthiacs, I. and II.; Herodotus, Bk. III., chaps. 1-67.

Latin.—Virgil, Georgics, Bk. I.; Horace, Odes, Bk. III.; Livy, Bk. XXII.

EXEMPTIONS FROM FEES UNDER PRESENTATION SCHOLARSHIPS, &c.

A number of these are in the gift of Benefactors, and entitle the Students holding them to exemption from the Sessional Fees in the Faculty of Arts. Sixteen have been placed by the Governors at the disposal of His Excellency the Governor General. Candidates must pass the usual Matriculation Examination.

[By command of His Excellency, four of these Exemptions will be offered for competition in the First Year Exhibition Examinations of the ensuing session.]

Eight exemptions from fees may be granted by the Board of Governors, from time to time, to the most successful students who may present themselves as candidates. By order of the Board one of these is given annually to the *Dux* of the High School of Montreal, and one to the Dux of any other Academy or High School sending up, in one year, three or more candidates competent to pass creditably the Matriculation Examination.

In the event of any Academy or High School in the Province of Quebec offering for competition among pupils an Annual Bursary in the Faculty of Arts, of not less than $80, the Governors will add the amount of the fees of tuition thereto.

Exemptions from fees, not exceeding three in number, may be given to holders of the Academy Diploma of the McGill Normal School, who, on fulfilling the required conditions, enter in the Second Year, if at the Diploma Examination they have taken 75 per cent. of the total marks, with not less than two-thirds of the marks in Latin and in Greek.

By a resolution of the Board of Governors exemptions are granted to students of any affiliated Theological College, recommended by its Principal, and entering the Faculty of Arts either as Undergraduates or as Partial Students.

One exemption is given annually to the pupil (boy or girl) from the Schools of the Protestant Commissioners, Montreal, who has taken the highest marks at the A.A. Examination, and is recommended by the Commissioners.

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§ III. COURSE OF STUDY.

1. Undergraduates are arranged according to their standing, as Students of the First, Second, Third or Fourth Year. They are required to attend all the courses of Lectures and pass the examinations appointed for their several years, under the Regulations of the Faculty as to attendance and conduct; the only exceptions are those in favour of Honour and Professional Students, stated in § V.

ORDINARY COURSE FOR THE DEGREE OF B.A.

First Year.—Classics; French or German; English Grammar and Literature; Pure Mathematics; Elementary Chemistry.

Second Year.—Classics; French or German; English Literature; Elementary Psychology and Logic; Pure Mathematics; Botany.

Third Year.—Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics); with any two of the following departments—French or German (whichever the Student has taken in the first two years); Experimental Physics*; Zoology; English and Rhetoric; together with the above, termed the *Ordinary Departments*, must be taken one *Additional Department*, for which see page 10.

Fourth Year.—Latin or Greek (same language as in Third Year); Mathematical Physics (as in Third Year, or Astronomy and Optics); Mental and Moral Philosophy; with any two of the following departments—French or German (same language as in previous years); Experimental Physics*; Geology; History; together with the above, termed the *Ordinary Departments*, must be taken one *Additional Department* (the same as chosen in the Third Year), for which see below.

* Students claiming exemptions (see § V) cannot take Experimental Physics if they have not taken the Third Year Mathematical Physics.

(N.B. The *Additional Departments*, referred to above, of which one must be selected, the same department being taken both in the third and fourth years, are as follows, viz. :—(1) Classics, including Latin and Greek. (2) Mathematical Physics, including Optics with Astronomy. (3) Experimental Physics, when not taken as part of the ordinary course. (4) Natural Science, viz., any one of the three following subjects :—(*a*) Theoretical and Practical Chemistry. (*b*) Geology of Canada and Palæontology. (*c*) Advanced Botany. (5) Mental and Moral Philosophy. (6) English with History. (7) One Modern Language (or Hebrew).

A Student cannot, in general, take the "Additional" Department in any subject unless he takes the "Ordinary" Department in the same subject; but in the Third Year, a Student taking English and Rhetoric may take either English or Mental and Moral Philosophy as his "Additional" Department.

Undergraduates are required to study either French or German for two years (viz., in the First and Second Years). taking the same language in each year. Any Student failing to pass the Examination at the end of the Second Year will be required to pass a Supplemental Examination, or to take an additional Session in the Language in which he has failed. In addition to the obligatory, there are other lectures, attendance on which is optional.

Students who intend to join any Theological School, on giving written notice to this effect at the beginning of the First Year, may take Hebrew instead of French or German.

Undergraduates who have been previously Partial or Occasional Students, and have in that capacity attended a particular Course or Courses of Lectures, may at the discretion of the Faculty, be exempted from further attendance on these Lectures, but no distinction shall in consequence be made between the Examinations f such Undergraduates and of those regularly attending Lectures.

2. At the Examination for the Degree of B.A., Honours are given in the following subjects, for which special Honour Courses are provided :—[For details see under § XII.]

1. *Classical Language and Literature.*
2. *Mathematics and Physics.*
3. *Mental and Moral Philosophy.*

4. *English Language, Literature and History.*
5. *Geology and other Natural Sciences.*
6. *Modern Language with History (Lansdowne Medal Course).*

Honours are given in the above subjects in the Third Year also, and in Mathematics in the First and Second Years.

Candidates for Honours are allowed exemptions under conditions stated in § V.

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§ IV. EXAMINATIONS.

COLLEGE EXAMINATIONS.

For Students of McGill College only.

1. There are two Examinations in each year: one at Christmas and the other at the end of the Session. In each of these the students who pass are arranged according to their answering as 1st Class, 2nd Class, and 3rd Class.

In the Fourth Year only, the University Examination for B.A. takes the place of the Sessional Examination.

2. Students who fail in any subject at the Christmas Examinations are required to pass a Supplemental Examination in that subject before admission to the Sessional Examinations.

3. Undergraduates who fail in one subject at the Sessional Examinations of the first two years are required to pass a Supplemental Examination in it. Should they fail in this, they will be required in the following Session to attend the Lectures and pass the Examination in the subject in which they have failed, in addition to those of the Ordinary Course, or to pass the Examination alone without attending lectures, at the discretion of the Faculty.

4. Failure in two or more subjects at the Sessional Examinations of the first two years, or in one subject at the Third Year Sessional examinations, involves the loss of the Session. The Faculty may permit the Student to recover his standing by passing a Supplemental Examination at the beginning of the ensuing Session. For the purpose of this Regulation, Classics and Mathematics are each regarded as two subjects.

5. The time for the Supplemental Examination will be fixed by the Faculty; the Examination will not be granted at any other time, except by special permission of the Faculty, and on payment of a fee of $5.

UNIVERSITY EXAMINATIONS.

For Students of McGill College and of Colleges affiliated in Arts.

I. FOR THE DEGREE OF B.A.

There are three University Examinations:—The *Matriculation* at entrance; the *Intermediate*, at the end of the Second Year; and the *Final*, at the end of the Fourth Year.

1. The subjects of the Matriculation Examination are stated in Section I.

2. In the Intermediate Examination the subjects are Classics and Pure Mathematics, Logic, and the English Language, with one other Modern Language, or Botany. Theological Students are allowed to take Hebrew instead of a Modern Language. The subjects for the examination of 1888 are as follows:

Classics.—Greek.—Euripides.—Medea.
Latin.—Horace.—Epistles, Book I.
Latin Prose Composition.

Mathematics.—Arithmetic.
Euclid, Books I, II., III., IV., VI and defs. of Book V.
Algebra, to Quadratic Equations, inclusive.
Trigonometry, including use of Logarithms.

Logic.—Jevons' Elementary Lessons in Logic.

English.—Spalding's History of English Literature or Lectures (see course). A paper on the essentials of British History (Collier).
With one of the following:—

1. *Botany and Vegetable Physiology.*—Structural and Systematic Botany, as in Gray's Text-Book, omitting the Descriptions of the Orders.
2. *French.*—C. Delavigne:—Les Enfants d'Edouard. Racine:—Iphigénie CONTANSEAU: Précis de la littérature française, from the beginning to the end of the XVII century. Translation into French:—Rasselas. Grammatical questions.
3. *German.*—Schmidt's German Guide; Adler's Reader (selections from secs. 3 and 4); Translation into German.
4. *Hebrew.*—The Intermediate course (See § XII).

3. For the Final or B.A. Ordinary Examination the subjects are those appointed as obligatory in the Third and Fourth Years, viz., Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics) or Astronomy and Optics; Mental and Moral Philosophy;

and those departments (two "Ordinary" and one "Additional") which the Candidate may have selected for himself in the Third and Fourth Years. (See § III.)

The subjects in detail for 1888 are as follows :—

Classics.

1. *Greek.*—Æschines, Contra Ctesiphontem. Æschylus, Prometheus Vinctus; Greek History :—The Peloponnesian war. (Or Latin, as follows) :—

2. *Latin.*—Tacitus, Annals, Book I.; Roman History (The twelve Cæsars). Juvenal, Satt.: VIII. and XIII.

*In Classics Greek may be reckoned as the Additional Department by students taking Latin as their Ordinary subject, and, vice versa, Latin by students taking Greek.

Mathematical Physics.

1. Mechanics and Hydrostatics, as in Galbraith & Haughton's text-books.
2. Optics and Astronomy, " "

*Astronomy and Optics may be reckoned as the Additional Department by Students taking Mechanics and Hydrostatics as their ordinary subjects, and, vice versa, Mechanics and Hydrostatics by Students taking Astronomy and Optics. The Experimental Physics of the Session may be regarded as the "Additional" to either, if the Student prefer.

Mental and Moral Philosophy.

Calderwood's Handbook of Moral Philosophy (omitting the Historical Sketch, pp. 43-76), and Rogers' Manual of Political Economy.

* Lectures, with Schwegler's History of Philosophy, Chaps. 23-45 (inclusive), and Lorimer's Institutes of Law.

Natural Science.

Mineralogy and Geology, as in Dana's Manual and Dawson's Lecture Notes. Geology of Canada and Palæontology, or Practical Chemistry, as in § XII.

Experimental Physics.

**Heat and Light, Electricity, Magnetism and Sound*, (see Courses of Lectures § XII).

History.

Myers : — Mediæval and Modern History; Bryce's Holy Roman Empire (omit Chaps. VI., VIII., IX., XIII., and Supplementary Chapter).

* As in § XII.

French.

The Course of French for the Fourth Year.

* The subject of the Additional Department as in § IX.

German.

The Course of German for the Fourth Year.
* Additional Department as in § XII.

Hebrew (Theological Students only).

The advanced Course; see § XII.

* Additional Departments, one of which is to be selected by each candidate.

For details of each subject, see Courses of Lectures, § XII.

At the B.A. Ordinary Examination, of those Candidates who obtain the required aggregate of marks, only those who pass in the First Class in three of the Departments, and not less than Second Class in the remainder, shall be entitled to be placed in the First Class for the Ordinary Degree.

4. Every Candidate for the Degree of B.A. is required to make and sign the following

DECLARATION.

"Ego————polliceor sancteque recipio me, pro meis viribus, studiosum fore communis hujus Universitatis boni, et operam daturum ut ejus decus et dignitatem promoveam."

II. FOR THE DEGREE OF M.A.

1. Candidates, who must be Bachelors of Arts of at least three years standing, are required to prepare and submit to the Faculty of Arts, not less than two months before proceeding to the degree, a Thesis on some Literary or Scientific *subject previously approved* by the Faculty.

The last day in the session of 1887-8 *for sending in Theses for M.A. will be Jan.* 30*th*, 1888.

2. All candidates, except those who have taken First Rank B.A. Honours, or have passed First Class in the Ordinary Examinations for the Degree of B.A., are required to pass an examination also, either in Literature or in Science, as each candidate may select.

(*a*) The subjects of the Examination in *Literature* are divided into two groups:—

A.—1. Latin. 2. Greek. 3. Hebrew.

B.—1. French. 2. German. 3. English.

(*b*) The subjects for the Examination in *Science* are divided into three groups:—

A.—1. Pure Mathematics (Advanced or Ordinary). 2. Mechanics (including Hydrostatics). 3. Astronomy. 4. Optics.

B.—1. Geology and Mineralogy. 2. Botany. 3. Zoology. 4. Chemistry.

C.—1. Mental Philosophy. 2. Moral Philosophy. 3. Logic. 4. History of Philosophy.

(*c*) Every Candidate in Literature is required to select two subjects out of one group in the Literary section, and one out of the other group in the same section for the Examination. Every Candidate in Science is required to select two out of the three groups in the Scientific section; and in one of the groups so chosen to select two subjects, and in the other group one subject for Examination.

(*d*) One of the subjects selected as above will be considered the principal subject, and the other two as subordinate subjects.

For further details of the Examination application must be made to the Faculty before the above date. For fees see § XI.

III. FOR THE DEGREE OF LL.D.

Candidates must be Masters of Arts of at least twelve years standing. Every Candidate for the degree of LL.D. in Course is required to prepare and submit to the Faculty of Arts, not less than three months before proceeding to the degree, twenty-five printed copies of a Thesis on some Literary or Scientific *subject previously approved* by the Faculty, and possessing such a degree of Literary or Scientific merit, and evidencing such originality of thought or extent of research as shall, in the opinion of the Faculty, justify it in recommending him for that degree.

N.B. The subject should be submitted before the Thesis is written.

Every Candidate for the Degree of LL.D. in Course is required to submit to the Faculty of Arts, with his Thesis, a list of books, treating of some one branch of Literature or of Science, satisfactory to the Faculty, in which he is prepared to submit to examination, and on which he shall be examined, unless otherwise ordered by vote of the Faculty. For Fees see § XI.

§ V. SPECIAL PROVISIONS FOR CANDIDATES FOR HONOURS AND FOR PROFESSIONAL STUDENTS.

I. Candidates for Honours in the Second Year.

Candidates for Honours in the Second Year who have obtained Honours in the First Year may omit the lectures and examinations in either Modern Languages or Hebrew) or Botany, giving notice of the subject at the beginning of the session.

II. Candidates for Honours in the Third Year.

Every Candidate for Honours in the Third Year must, in order to obtain exemptions, have passed the Intermediate Examination, and must in the Sessional Examination of the Second Year have taken first class in the subject in which he proposes to compete for Honours; such candidates shall be entitled in the Third Year to exemption from lectures and examinations in any one of the four "Ordinary" departments required by the general rule (see § III.), except that in which he is a Candidate for Honours. A Candidate for Honours in the Third Year who has failed to obtain Honours shall be required to take the same examinations for B.A. as the ordinary undergraduates (see note below).

III. Candidates for B.A. Honours.

A Student who has taken Honours of the first rank in the Third Year, and desires to be a Candidate for B.A. Honours, shall be required to attend two only of the courses of lectures given in the ordinary departments and to pass the two corresponding examinations only at the ordinary B.A. Examination. The "Additional Department" required for the ordinary B.A. (see § IV.) forms part of the Honour course. A Student who has taken Second Rank Honours in the Third Year and desires to be a Candidate for B.A. Honours in the same subject shall be allowed to continue in the Fourth Year the study of the same departments that he has taken in the Third Year, but shall be required to take the same number of departments as in the Ordinary Course.

NOTE.—For subjects of "Ordinary" and "Additional" Departments see § III.

IV. Professional Students.

Students of the Third and Fourth Years, matriculated in the Faculties of Law, Medicine or Applied Science of the University, or in any affiliated Theological College, are entitled to exemption from the Additional Department or any one of the Ordinary Departments required in the Third and Fourth Years. (For rule concerning "Special Certificates" see § VI.)

To be allowed these privileges in either year they must give notice at the commencement of the Session to the Dean of the Faculty of their intention to claim

exemptions as Professional Students, and must produce at the end of the Session certificates of attendance on a full course of Professional Lectures during the year for which the exemption is claimed.

V. Students of the University attending Affiliated Theological Colleges.

1. Such Students, whether entered as Matriculated or Occasional, are subject to the regulations of the Faculty of Arts in the same manner as other students.

2. The Faculty will make formal reports to the Governing body of the Theological College which any such Students may attend, as to:— [1] their conduct and attendance on the classes of the Faculty ; and [2] their standing in the several examinations ; such reports to be furnished after the Christmas and Sessional Examinations severally, if called for.

3. Matriculated Students are allowed no exemptions in the course for the degree of B.A. until they have passed the Intermediate Examination ; but they may take Hebrew in the First and Second Years, instead of French and German.

4. In the Third and Fourth Years they are allowed exemptions, as stated above.

* Any Student who, under any of the above rules, desires to take Experimental Physics, is required to take Mechanics and Hydrostatics also, in the Third Year.

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§ VI. MEDALS, HONOURS, PRIZES AND CLASSING.

1. GOLD MEDALS will be awarded in the B.A. Honour Examinations to Students who take the highest Honours of the First Rank in the subjects stated below, and who shall have passed creditably the Ordinary Examinations for the Degree of B.A., provided they have been recommended therefor to the Corporation by the Faculty on the report of the Examiners :—

The *Henry Chapman Gold Medal*, for the Classical Languages and Literature.
The *Prince of Wales Gold Medal*, for Mental and Moral Philosophy.
The *Anne Molson Gold Medal*, for Mathematics and Natural Philosophy.
The *Shakespeare Gold Medal*, for the English Language, Literature and History.
The *Logan Gold Medal*, for Geology and other Natural Sciences.
Major Hiram Mills Gold Medal, for a subject to be chosen by the Faculty from year to year.

If there be no Candidate for any Medal, or if none of the Candidates fulfils the required conditions, the Medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes in the subjects for which the Medal was intended. For details, see announcements of the several subjects below.

2. HONOURS, of First or Second Rank, will be awarded to those Undergraduates who have successfully passed the Examinations in any Honour Course established by the Faculty (*N. B.— The Honour Course includes the Additional Department in each subject*), and have also passed creditably the ordinary Examinations in all the subjects proper to their year.

By an Order of the Lieutenant-Governor of Ontario in Council, Honours in this University confer the same privileges in Ontario as Honours in the Universities of that Province, as regards certificates of eligibility for the duties of Public School Inspectors, and as regards exemption from the non-professional Examination of Teachers for First-class Certificates for Grades "A. and B."

3. SPECIAL CERTIFICATES will be given to those candidates for B.A. who shall have been placed in the First Class at the ordinary B.A. Examination. The candidates must have obtained three-fourths of the maximum marks in the aggregate of the studies proper to their year, be in the First Class in not less than half the subjects, and have no Third Class. At this examination no candidate who has taken exemptions (see § V.) can be placed in the First Class unless he has obtained First Class in each of the departments in which he has been examined.

4. CERTIFICATES of High General Standing will be granted to those Undergraduates of the first two years who have obtained three-fourths of the maximum marks in the aggregate of the Studies proper to their year, are in the First Class in not less than half the subjects, and have not more than one Third Class. In the Third Year the conditions are the same as for the Special Certificate for B.A.

5. PRIZES OR CERTIFICATES to those Undergraduates who may have distinguished themselves in the studies of a particular class and have attended all the other classes proper to their year.

6. His Excellency the MARQUIS OF LANSDOWNE has been pleased to offer a GOLD MEDAL for the encouragement of the study of Modern Languages and Literature, with History, or for First Rank General Standing, as may be announced.

(*a*). The Regulations for the former are as follows :—

(1). The Subjects for competition shall be French and German, together with the History part of the present Honour Course for the Shakespeare Medal.

(2). The course of study shall extend over two years, viz., the Third and Fourth years.

(3). The successful Candidate must be capable of speaking and writing both languages correctly.

(4.) There shall be examinations in the subjects of the course in both the Third and Fourth Years, at which Honours may be awarded to deserving Candidates.

(5). The general conditions of competition, and the privileges as regards exemptions, shall be the same as for the other Gold Medals in the Faculty of Arts.

(6). Students from other Faculties shall be allowed to compete, provided they pass the examination of the Third and Fourth Years in the above subjects.

(7). Candidates desiring to enter on the Third Year of the Course, who have not obtained First Class standing at the Intermediate or Sessional Examinations of the Second Year in Arts, are required to pass an examination in the work of the first two years of the course in Modern Languages, if called on to do so by the Professors.

(8). The subjects of Examination shall be as follows :—

I. FRENCH.—*Third Year.*

Racine : —Phèdre ; Les Plaideurs. Boileau :—L'Art Poétique. Pascal :—Les Pensées. La Bruyère :—Les Caractères. Ampère :—Formation de la Langue française.

In addition to the ordinary and additional departments as stated in the Calendar.

Fourth Year.

Molière :—Le Misanthrope.
Corneille :—Cinna.
La Rochefoucauld :—Les Maximes.
Dr. C. Saucerotte : L'esprit de Montaigne.
Auguste Brachet :—Grammaire historique.
Etudes des anciens textes français (Demogeot).

In addition to the ordinary and additional departments as stated in the Calendar.

II. GERMAN.—*Third Year.*

Wieland.—Oberon.
Schleicher.—Die Deutsche Sprache (History of the German Language).
History of German Literature from 1750, being a critical review of the principal writers of the classical period. The men of 'Sturm und Drang.' The Romantic Schools. Modern Lyric Poets. (Gostwick and Harrison's Outlines.)

With the ordinary and additional departments prescribed for this year.

Fourth Year.

A special study of Goethe's 'Faust' (Part I.)
Selections from Heine's Lyrical Poems.
Schleicher.—Die Deutsche Sprache.

German Literature from 1150 to 1350 :—Mediæval classic writers—Epic, Lyric and Didactic Poetry—(Kurz, Leitfaden zur Geschichte der deutschen Literatur).

With the ordinary and additional departments prescribed for this year (excepting 'Moschzisker').

III. History.—(*See Honour Course for Shakespeare Medal.*)

The competitive Examination of the Fourth Year will include the work of both the Third and Fourth Years.

(*b*) The Regulations for the Gold Medal to be awarded for First Rank General Standing, are as follows :—

(1). The successful candidate must take no exemptions or substitutions of any kind, whether Professional or Honour, in the Ordinary B.A. Examinations.

(2). He shall be examined in the following subjects :—

(*a*) *Classics* both languages); (*b*) *Mixed Mathematics :—Mechanics, Hydrostatics, Optics, Astronomy.* (*c*) *Mental and Moral Philosophy;* and any *two* of the following subjects, or any *one* of them with its Additional Department :—(*d*) Natural Science, (*e*) Experimental Physics, (*f*) English and History, (*g*) French, (*h*) German.

(3). His answering must satisfy special conditions laid down by the Faculty.

(4). The same candidate cannot obtain the Gold Medal for First Rank General Standing, and also a Gold Medal for First Rank Honours.

7. The Neil Stewart Prize of $20 is open to all Undergraduates of this, and also to Graduates of this or any other University, studying Theology in any College affiliated to this University, under the following rules :—

(1). The prize will not be given for less than a thorough examination in Hebrew Grammar passed in the First Class, in reading and translating the Pentateuch and such poetic portions of the Scripture as may be determined.

(2). In case competitors should fail to attain the above standard the prize will be withheld, and a prize of Forty Dollars will be offered in the following year for the same.

[Course for the present year :—Hebrew Grammar (Gesenius); Translation and analysis of the first ten chapters of Genesis; the Prophet Habakkuk (the whole book); and the first five Psalms.]

3. There will be two Examinations of three hours each; one in Grammar and the other in Translation and Analysis.

The Prize, founded by the late Rev. C. C. Stewart, M.A., and terminated by his death, was re-established by the liberality of the

late Neil Stewart, Esq., of Vankleek Hill, and will be offered for competition next Session.

8. EARLY ENGLISH TEXT SOCIETY'S PRIZE.—The prize, the annual gift of the Early English Text Society, will be awarded for proficiency in (1) Anglo-Saxon (2) Early English before Chaucer.

The subjects of Examination will be :—

(1) The Lectures of the Third and Fourth Years on Anglo-Saxon.

(2) Specimens of Early English (Clarendon Press Series, ed. Morris and Skeat,) Part II., A.D., 1298—A.D., 1393. The Lay of Havelok the Dane (Early English Text Society, ed. Skeat).

9. NEW SHAKESPEARE SOCIETY'S PRIZE. This Prize the annual gift of the New Shakespeare Society, will be awarded for a critical knowledge of the following plays of Shakespeare :—

Hamlet ; Macbeth ; Othello ; King Lear.

10. The names of those who have taken Honours, Certificates or Prizes will be published in order of merit ; with mention, in the case of Students of the First and Second Years, of the schools in which their preliminary education has been received.

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§ VII. LICENSED BOARDING HOUSES.

(*Regulations for Students in Arts, passed by the Corporation, April,* 1875.)

1. All Students under 21 years of age, not residing with parents or guardians, nor belonging to a Theological College, shall reside in licensed boarding-houses, unless they produce written authority from parents or guardians to reside elsewhere.

2. Persons applying for a license to keep boarding-houses shall produce evidence satisfactory to the Principal as to their character and fitness, and the suitability of the house for the health and comfort of the Students. They shall also supply him with a statement of charges.

3. The keeper of the boarding-house shall report immediately to the Principal the entrance or departure of any Student, and any instance of immorality or disorderly conduct.

§ VIII. ATTENDANCE AND CONDUCT.

All Students shall be subject to the following regulations for attendance and conduct:—

1. A Class-book shall be kept by each Professor or Lecturer, in which the presence or absence of Students shall be carefully noted; and the said Class-book shall be submitted to the Faculty at all their ordinary meetings during the Session.

2. Each Professor shall call the roll immediately at the beginning of a lecture. Credit for attendance on any lecture may be refused on the grounds of lateness, inattention or neglect of study, or disorderly conduct in the class-room. In the case last mentioned the student may, at the discretion of the Professor, be required to leave the class-room. Persistence in any of the above offences against discipline, after admonition by the Professor, shall be reported to the Dean of Faculty. The Dean may, at his discretion, reprimand the student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from Classes.

3. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

4. While in the College, or going to or from it, students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the College buildings or grounds may admonish the student, and, if necessary, report him to the Dean.

5. Every student is required to attend regularly the religious services of the denomination to which he belongs, and to maintain, without as well as within the walls of the College, a good moral character.

6. When students are brought before the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, impose fines, disqualify from competing for prizes or honours, suspend from Classes, or report to the Corporation for expulsion.

7. Any student who does not report his residence on or before November 1st in each year is liable to a fine of one dollar.

8. Any student injuring the furniture or building will be required to repair the same at his own expense, and will, in addition, be subject to such other penalty as the Faculty may seem fit to inflict.

9. All cases of discipline involving the interest of more than one Faculty, or of the University in general, shall be immediately reported to the Principal, or, in his absence, to the Vice-Principal.

[NOTE.—All students are required to appear in Academic dress while in or about the College building. Students are requested to take notice that petitions to the Faculty on any subject cannot, in general, be taken into consideration, except at the regular meetings, appointed in the Calendar.]

§ IX. LIBRARY.

Extract from the Regulations.

1. The Books in the Library are classed in two divisions:—1st, Those which may be lent; and, 2nd, those which may not, under any circumstances, be removed from the Library. The classification shall be determined by the Librarian.

2. Students in the Faculty of Arts or of Applied Science, who have paid the Library fee, may borrow books on depositing the sum of $5 with the Bursar, which deposit, after the deduction of any fines due, will be repaid at the end of the Session on the certificate of the Assistant Librarian that the books have been returned uninjured.

3. Students may borrow not more than three volumes at one time, except on the recommendation in writing of a Professor for specified books, and must return them within two weeks, on penalty of a fine of 5 cents a volume for each day of detention. An additional deposit of $4 entitles a student to borrow two extra volumes.

4. A student incurring fines beyond the sum-total of $1 shall be debarred the use of the Library until they have been paid.

5. Any volume, or volumes, lost or damaged by any person shall be replaced or paid for at such rates as the Library Committee may direct; and such rate of payment shall be determined by the value of the book itself, or of the set to which the volume belongs.

6. Graduates in any of the Faculties, on making a deposit of $5, are entitled to the use of the Library, subject to the same rules and conditions as students; but they are not required to pay the annual Library fee.

7. Members of the McGill College Book Club, on presenting annually a certificate of their membership, are by a special regulation of Corporation entitled to the use of the Library on the same conditions as Graduates, but they are not required to make a deposit.

8. Students in the Faculties of Law and Medicine, who have paid the Library fee to the Bursar, may read in the Library, and, on depositing the sum of $5 with the Bursar, may borrow books on the same conditions as students in Arts. They are required to present their Matriculation Tickets to the Bursar and to the Librarian or Assistant Librarian.

9. Persons not connected with the College may consult Books in the Library on obtaining an order from any of the Governors, or from the Principal, or the Dean of the Faculty of Arts or of Applied Science, or from any of the Professors in the said Faculties. Donors of books or money to the amount of Fifty dollars may at any time consult books on application to the Librarian.

10. The Library is kept open from 9 a.m. to 4 p.m. daily, and no person shall be allowed in the Library except during these hours.

11. No person, other than the Librarian and the assistants, is allowed to enter the alcoves, or to take down books from the shelves, except members of Corporation, and Professors, or those whom any of the above may accompany personally.

12. A person desiring to read or to borrow a book, which he has ascertained from the Catalogue to be in the Library, will fill up one of the blank forms provided for Readers and Borrowers respectively, and hand it to the Assistant Librarian who will thereupon procure him the book.

13. Readers must return the books they have obtained to the Assistant Librarian before leaving the Library.

14. No conversation is permitted in the Library.

§ X. PETER REDPATH MUSEUM.

1. The Museum will be open every lawful day from 9 a.m. till 5 p.m., except when closed for any special reason by order of the Principal or Committee.

2. Students will obtain tickets of admission from the Principal on application.

3. Students will enter by the front door only, except when going to lectures.

4. Any Student wilfully defacing or injuring specimens, or removing the same, will be excluded from access to the Museum for the Session.

§ XI. FEES.

Matriculation Fee for the First Year (to be paid in the Year of Entrance only)	$4 00
For the Second Year (exigible from Students who enter in the Second Year, and also from those who have failed in the First Year and re-enter in the Second Year on Examination)	6 00
Sessional Fee	20 00
Library Fee	4 00
Gymnasium Fee	2 50

Undergraduates are required to pay all the above fees.

Partial Students, viz., those taking three or more Courses of Lectures, are required to pay the Matriculation, Library and Gymnasium Fees, and $5 for each Course which they attend, or $20 for all the courses.

Occasional Students taking one course of Lectures only are required to pay $5 per Session for that course.

Occasional Students taking two courses of Lectures are required to pay the Library Fee and $5 for each course.

N B.—The lectures in one subject in any one of the four College Years constitute a "Course."

The Matriculation, Library, and Gymnasium Fees are exigible from Students holding exemptions from Sessional Fees.

Graduates in Arts are allowed to attend, without payment of fees, all lectures except those noted as requiring a special fee.

The fees must be paid to the Secretary and the tickets shown to the Vice-Dean within a fortnight after the commencement of attendance in each session. In case of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty and on payment of a fine of $2.

[All fines are applied to the purchase of books for the Library.]

Fee for the Degree of B.A	$5 00
" " " *M.A*	10 00*
" " " *LL.D*	50 00*

If the Degree of M.A. be granted, with permission to the Candidate, on special grounds, to be absent from Convocation, the fee is.....$25 00.

The B.A. fee must be paid before the Examination.

The M.A. or LL.D. fee must be sent to the Secretary of the University at the same time that the Candidate sends his Thesis to the Dean of the Faculty. This is a condition essential to the reception of his application.

* A Bachelor of Arts or Master of Arts, intending to proceed to a higher Degree, is required, *in addition* to the above, to keep his name on the books of the University, by the annual payment of a fee of $2 to the Registrar of the University (which payment suffices also for Registration under Chap III. of the Statutes of the University). He may, if he prefer it, compound for the above annual fees, by the payment of $6 in one sum for the Master's Degree, or $30 for the Doctor's Degree, on or before the date of application for the Degree.

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§ XII. COURSES OF LECTURES.

I. ORDINARY COURSE.

I. CLASSICAL LITERATURE AND HISTORY.

(Major H. Mills Professorship of Classics.)

Professor, Rev. G. Cornish, M.A., LL.D.

Asst. Prof., A. J. Eaton, M.A., Ph.D.

GREEK.

First Year.—XENOPHON, HELLENICS, Bk. I.

Second Year.—EURIPIDES, MEDEA.

Third Year.—LYSIAS.—CONTRA ERATOSTHENEM.
ÆSCHYLUS.—PROMETHEUS VINCTUS.

Fourth Year.—ÆSCHINES.—CONTRA CTESIPHONTEM.

LATIN.

First Year.—VIRGIL.—ÆNEID, Book. VI.
SALLUST.—CATILINE.
Latin Prose Composition.

Second Year.—HORACE.—EPISTLES, Book I.
TACITUS.—GERMANIA, Chaps. I.-XXVII.
Latin Prose Composition.

Third Year.—JUVENAL.—SATIRES VIII. and XIII.
LIVY.—Book XXI.
Latin Prose Composition.

Fourth Year.—TACITUS.—ANNALS, Book I.
Latin Prose Composition.

Text-Books.—Greek Grammar, Goodwin. Latin Prose Composition :—First Year, Arnold's Latin Prose by Bradley.

In the work of the Class the attention of the Student is directed to the collateral subjects of History, Antiquities and Geography; also to the grammatical structure and affinities of the Greek and Latin Languages; and to Prosody and Accentuation.

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2. ENGLISH LANGUAGE AND LITERATURE.

(MOLSON PROFESSORSHIP.)

Professor, CHAS. E. MOYSE, B.A.

Lecturer, PAUL T. LAFLEUR, M.A.

First Year.—English Language and Literature. Three Lectures a week.
Until Christmas the work of the class will partly consist of exercises in Analysis and Composition. One lecture a week will be given to the study of an English classic. Milton's *Comus* has been selected for the Session of 1887-8. After Christmas there will be a course of about thirty lectures on English Literature, indicating the leading features of its development throughout its history. The use of Prof. Henry Morley's Charts of English Literature is recommended. Students are also recommended to read the first chapter of Henry Morley's English writers (Cassell 1887.)

Second Year.—A period of English Literature, and one play of Shakespeare.

One Lecture a week before Christmas; two Lectures a week after Christmas.

During the Session of 1887-8, the Literature of the Elizabethan period will form the subject of the Lectures. Shakespeare—Tempest. [Clarendon Press Edition.]

Third Year.—*A.* Chaucer's Prologue to Canterbury Tales.

Lecture once a week.

Text-book, Chaucer's Prologue, &c., ed. Morris.

B. Rhetoric, Lecture once a week.

Text-book, Bain's Rhetoric.

Additional Department.—Early English.—Morris and Skeat, extt. I.-IX. inclusive

Milton; Comus; Areopagitica.

Burke—Reflections on French Revolution.

Macaulay—Essays on Clive, Ranke's History of the Popes and Warren Hastings.

History—Bryce's Holy Roman Empire, as on page 14.

Fourth Year.—History.

The Lectures will be a sketch of general European History from the fall of the Roman Empire to the end of the Eighteenth Century. The use of Prof. Nicol's Tables of European History is recommended.

Additional Department.—Anglo-Saxon; Sweet's Anglo-Saxon Reader, (4th edition) Extt. IV., VIII., and XXI.

Spenser—Faerie Queene, Book I.

Pope—Essay on Criticism, Essay on Man.

Tennyson—In Memoriam.

History—Buckle, Hist. of Civ. in England, 4 caps.

(The Lectures of the Additional Department in each year are comprised in the Honour Lectures.)

3. MENTAL AND MORAL PHILOSOPHY.

(JOHN FROTHINGHAM PROFESSORSHIP OF MENTAL AND MORAL PHILOSOPHY.

Professor, REV. J. CLARK MURRAY, LL.D.

Lecturer, PAUL T. LAFLEUR, M.A.

Second Year.—First Term.—Elementary Psychology. (Text-book:—Murray's Handbook of Psychology, Book I.) Second Term.—Logic (Text-book:—Jevons' Elementary Lessons in Logic).

Third Year.—*Additional Department.*—Advanced Logic and Psychology (Text-books:—Mill's System of Logic, Books I.-III.; and Murray's Handbook of Psychology, Book II.).

Fourth Year.—First Term.—The Psychological Basis of Ethics. Second Term.—Ethics Proper, comprising the elementary principles of Jurisprudence and Political Science. *Additional Department.*—Modern Philosophical Systems.

In the Third and Fourth Years Students are also required to write occasional Essays on Philosophical Subjects.

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4. FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. DAREY, M.A., B.C.L., LL.D., Officier d'académie.

First Year.—DAREY, Principes de Grammaire française.
LA FONTAINE, Les Fables, livres I. et II.
MOLIÈRE, Le Bourgeois gentilhomme.
Dictation. Colloquial exercises.

Second Year.—DAREY, Principes de Grammaire française.
C. DELAVIGNE, Les Enfants d'Edouard.—RACINE, Iphigénie.
CONTANSEAU, Précis de littérature française, depuis son origine jusqu'à la fin du XVIIe siècle.
Translation into French :—DR. JOHNSON, Rasselas.
Dictation. Parsing. Colloquial exercises.

Third Year.—CORNEILLE, Horace.
Cogery :—Third French course.
Translation into French :—Dr. Johnson, Rasselas.
French Composition. Dictation.
CONTANSEAU, Précis de littérature française, depuis le XVIIe siècle jusqu'à nos jours.

Additional Department.—LA FONTAINE, Les Fables.
RACINE, Les Plaideurs.
PAUL ALBERT, Littérature du XVIIe siècle.
Translation into French :—GOLDSMITH, The Vicar of Wakefield.
CORNEILLE, Horace.

Fourth Year.—Cogery.—Third French course.
BONNEFON, Les Écrivains modernes de la France.
Translation into French :—MACAULAY, Warren Hastings.
French Composition. Dictation.
CORNEILLE, Horace.

Additional Department.—
AUG. BRACHET, Grammaire historique.
PAUL ALBERT, La Littérature française, des origines à la fin du XVIe siècle.
EMILE SOUVESTRE, Un Philosophe sous les toits.
Translation into French :—As You Like it.

The Lectures in the Third and Fourth Years are given in French.

5. GERMAN LANGUAGE AND LITERATURE.

Professor, C. F. A. MARKGRAF, M.A.

First Year.—Schmidt's German Guide (1st Course). Adler's Progressive German Reader (selections from Sections 1 and 2). Translations, oral and written.

Second Year.—Schmidt's German Guide (2nd Course). Adler's Progressive German Reader (selections from Sections 3–5). Translations, oral and written. Parsing.

Third Year.—Schmidt's German Guide (3rd Course). Chamisso, Peter Schlemihl; Lessing, Minna von Barnhelm. History of German Literature from the earliest periods to the close of the 18th century (a brief survey by the Professor). Translation into German.

Additional Department.—Koerner, Leyer und Schwert; Schiller, Wilhelm Tell. Translation from English Prose writers.

Fourth Year.—Whitney's German Grammar (excerpts); Schiller, Wallenstein. Moschzisker's Guide to German Literature (Epoch VII., Sections II —VI.; 1750-1850).
Translation from English Prose writers. German Composition.

Additional Department.—Whitney's Grammar (cont.).
Goethe, Iphigenie auf Tauris.
Lessing, Nathan der Weise.
Schiller, Geschichte des dreissigjahrigen Krieges.

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6. HEBREW AND ORIENTAL LITERATURE.

Rev. Professor COUSSIRAT, B.A., B.D., Officier d'académie.

Elementary Course.—Reading and Grammar with oral and written exercises in Orthography and Etymology.—Translation and Grammatical Analysis of Genesis.—Text-books, Elements of Hebrew; Introductory Hebrew Method and Manual, by Dr. Harper.

Intermediate Course.—Grammar.—Translation from Genesis, chap. II-VI, Exodus, chap. XX; Deuteronomy, chap. XXXII.—Exercises:—Hebrewi nto English, and English into Hebrew.—Syntax—Reading of the Masoretic Notes.

Advanced Course.—Gesenius' Grammar.—Exercises continued.—Translation. Reading of the Masoretic Notes.

First Part:—Isaiah; Psalms.

Second Part:—Job; Ecclesiastes; Jeremiah.

Additional Department (Optional):—(*For Third and Fourth Years.*)
The Chaldee Language:—Brown's Aramaic Method and Translation.
The Chaldee portions of Scripture. Targum of Onkelos and T. Yerushalmi.
The Syriac Language:—Grammar and Translation from the Peshito.

The course comprises Lectures on the above Languages and their Literature in particular, with a general notice of the other Oriental Languages, their genius and peculiarities. Comparative Philology, affinity of Roots, &c., also receive due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, &c.

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7. MATHEMATICS AND NATURAL PHILOSOPHY.

(PETER REDPATH PROFESSORSHIP OF NATURAL PHILOSOPHY.)

Professor, ALEXANDER JOHNSON, M.A., LL.D.

In the ordinary work of the First Year assistance will be given by G. H. Chandler, M.A., Professor of Practical Mathematics in the Faculty of Applied Science.

MATHEMATICS.—(*First Year.*)—Arithmetic—Euclid, Books 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6), Todhunter's Edition—Colenso's Algebra (Part 1.) to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

MATHEMATICS.—(*Second Year*)—Arithmetic, Euclid, Algebra, and Trigonometry as before.—Nature and use of Logarithms.—Remainder of Galbraith and Haughton's Plane Trigonometry.

The course for the Intermediate University Examination consists of the Mathematics of the first two years.

MATHEMATICAL PHYSICS.—(*Third Year*)—Galbraith and Haughton's Mechanics, viz., *Statics*, First 3 chapters, omitting sec. 5, chapter I., and sect. 21, chapter II.; *Dynamics*, subjects of the First 5 chapters. Galbraith and Haughton's Hydrostatics.

Additional Department.—Optics (Galbraith and Haughton). Descriptive Astronomy (Lockyer's Elementary Astronomy, English edition; First three chapters, viz., The Stars and Nebulæ; The Sun; The Solar System). Students are recommended to use with this an "Easy Guide to the Constellations," by Gall.

ASTRONOMY.—(*Optional*).—*Fourth Year.*—Galbraith and Haughton's Astronomy—The lectures on this subject will be given before Christmas. This, with Optics, forms the Additional Department for the Fourth Year (see note on B.A. Examination).

EXPERIMENTAL PHYSICS.—(*Third and Fourth Years*). 1.—*Light.*—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarization. 2.—*Heat.*—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3.—*Electricity*—Statical and Dynamical:—including Electro-Magnetism

—Magneto-Electricity—Thermo-Electricity—Diamagnetism—Electric Measurements—Practical Application to Telegraphy, &c. 4.—*Magnetism.* 5.—*Sound.*—Theory of Undulations—Production and Propagation of Sound—Vibrations of Strings, Rods and Plates—Vibrations of Fluids—Musical Sounds. Text-book; —Ganot's Treatise, translated by Atkinson. This Course extends over two Years.

The Subjects for the Session 1887-88 are Light and Heat.

The Lectures in Mathematical and Experimental Physics will be illustrated by Apparatus, of which the College has a very good collection.

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8. GEOLOGY AND NATURAL HISTORY.

(LOGAN PROFESSORSHIP OF GEOLOGY.)

Professor, Sir J. WM. DAWSON, C.M.G., LL.D., F.R.S., F.G.S.

B. J. HARRINGTON, B.A., Ph.D., F.G.S., Professor of Mineralogy.

ZOOLOGY AND PALÆONTOLOGY. (*Third Year.*)—Elements of Animal Physiology. Classification of Animals. Characters of the Classes and Orders of Animals, with Recent and Fossil Examples, taken as far as possible from Canadian Species. Demonstrations in the Museum.

Text-book.—Dawson's Hand-book of Zoology, with books of reference.

A prize of $25 will be given by the Professor for the best collection of specimens of fossils or of any group of animals, accompanied with a catalogue of names and localities and (if fossils) of formations. The Prize Collections or duplicates of them to remain in the Museum if required. Candidates must be Students of Zoology of the previous session.

MINERALOGY AND GEOLOGY.—(*Fourth Year.*)

1. *Mineralogy and Lithology.*—An elementary course, in which attention is given more particularly to such minerals and rocks as are important in Geology or useful in the Arts.

2. *Stratigraphy, Chronological Geology and Palæontology.* Data for determining the relative ages of Formations. Classification according to age. Fauna and Flora of the successive periods. Geology of British America. The lectures will be fully illustrated with specimens, and will be accompanied with demonstrations in the Museum and excursions for field work.

Text-books.—Dana's Manuals of Mineralogy and Geology; Dawson's Lecture Notes on Geology.

Students in Natural History are entitled to tickets of admission to the Museum of the Natural History Society of Montreal.

ADDITIONAL DEPARTMENT.—(*Third Year.*)

MINERALOGY, as in the Honour Course of the Third Year, omitting the Blowpipe work.

ADDITIONAL DEPARTMENT.—(*Fourth Year.*)

Geology of the Dominion of Canada (Part of Honour Course). Special studies in Palæontology in the Museum, with the aid of Nicholson's Palæontology, and Dawson's Handbook and Lecture notes.

9. BOTANY.

Professor :—D. P. PENHALLOW, B.Sc.

Second Year.—General Morphology and Classification. Descriptive Botany. Flora of Canada. Nutrition and reproduction of plants. Elements of Histology.

Text-books.—Gray and Bessey.

A prize of $20 will be given by the Professor for the best collection of plants and the greatest proficiency in their determination. The collections will be returned after examination. Candidates must be Students of Botany of the previous Session.

ADDITIONAL DEPARTMENT.—(*Third Year.*)

Fee :— $8 for use of instruments and re-agents.

Two lectures with practical work, each week.

Course.—Vegetable Histology and Micro-Chemistry of Plants, Microscopical Manipulations.

Text-books :—Goodale's Vegetable Histology and Poulsen's Botanical Microchemistry.

10. CHEMISTRY.

(DAVID J. GREENSHIELDS PROFESSORSHIP OF CHEMISTRY AND MINERALOGY.)

Professor :—B. J. HARRINGTON, B.A., PH.D.

First Year.—A course of Lectures preparatory to the Course in Natural Science. The Lectures are illustrated by experiments, and treat of the Elementary Constitutions of matter, the Laws of Chemical Combination by weight and volume, the Atomic Theory, Quantivalence, Chemical Formulæ and Equations, Chemical Attraction, characteristics of Acids, Bases, and Salts, Compound Radicals, the preparation and properties of the non-metallic and metallic Elements, and many of their compounds, &c. A few Lectures are also devoted to the consideration of some of the more important Organic Substances, including Starch, Sugars, the Vegetable Acids, and Alkaloids, Alcohol, &c. During the Course attention is called, as far as possible, to the relations of Chemistry to various manufacturing industries.

Students in Arts may attend the course in Practical Chemistry with the First Year in Applied Science on payment of a fee of five dollars.

Text-book.—Nichol's Abridgment of Eliot and Stoıer's Manual of Chemistry.

ADDITIONAL DEPARTMENT.—(*Third Year.*)

(*Theoretical or Organic Chemistry*).—One lecture a week. (*Practical Chemistry*).—Qualitative Analysis, as in Jones' Junior Course of Practical Chemistry, two afternoons a week.

ADDITIONAL DEPARTMENT.—(*Fourth Year.*)

A course of Practical Chemistry, in continuation of that of the Third Year.

NOTE—New chemical laboratories, capable of accommodating about fifty students, have recently been erected, and afford excellent facilities for practical work.

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11. METEOROLOGY.

Superintendent of Observatory, C. H. MCLEOD, Ma.E.

Instructions in Meteorological Observations will be given in the Observatory, at hours to suit the convenience of the senior students.

Certificates will be granted to those students who pass a satisfactory examination on the construction and use of Meteorological Instruments and on the general facts of Meteorology.

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12. ELOCUTION.

MR. JOHN ANDREW, Instructor.

Students are recommended by the Faculty to avail themselves of the Instructions of Mr. Andrew, who will make arrangements for evening classes to meet during the Session.

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13. GYMNASTICS.

MR. FREDERICK S. BARNJUM, Instructor.

The classes will meet at the University gymnasium, at hours to be announced at the commencement of the Session. The Wicksteed gold, silver and bronze medals (the gift of Dr. R. J. Wicksteed) are offered for competition to students of the graduating class, and to students who have had instruction in the gymnasium for two sessions, the gold medal to the former, the silver and bronze medals to the latter. (See Regulations appended.)

II. HONOUR COURSES.

1. CLASSICS.

B.A. HONOURS, BEING THE HONOUR COURSE FOR STUDENTS OF THE THIRD AND FOURTH YEARS.

Candidates for B.A. Honours in Classics will be examined in the following subjects :—

I. GREEK.

Plato.—Republic, Books I. and II.
Aristotle.—The Poetics.
Herodotus.—Books VIII. and IX.
Thucydides.—Books VI. and VII.
Xenophon.—Hellenics, Books I. and II.
Hesiod.—Works and Days.
Æschylus.—Prometheus Vinctus.
" Seven against Thebes.
Sophocles.—Antigone.
Euripides. Medea.
Aristophanes. The Frogs.
Pindar.—Olympic Odes.
Theocritus.—Idylls I. to VI.
Demosthenes.—De Corona.
Æschines.—Contra Ctesiphontem.

II. LATIN.

Livy.—Books XXI., XXII. and XXIII.
Tacitus.—Annals, Books I. and II.
" Histories, Book I.
Virgil.—Æneid, Books I. to IV.
Plautus.—Aulularia.
Terence.—Adelphi.
Horace.—Satires, Book I.
Juvenal.—Satt. VIII. and X.
Persius.—Satt. V. and VI.
Cicero.—De Imperio Cn. Pompeii.
" De Officiis.

III. HISTORY OF GREECE AND ROME.

Text-books:

1. Grote's History of Greece.
2. Arnold's History of Rome.
3. Mommsen's History of Rome.
4. Mahaffy's History of Greek Literature.
5. Cruttwell's History of Roman Literature.
6. Cruttwell and Banton's Specimens in Roman Literature.
7. Donaldson's Theatre of the Greeks.

IV. COMPOSITION.

1. Composition in Greek and Latin Prose.

1. General paper on Grammar, History and Antiquities.

The Examination for B.A. Honours will extend over four days, in the morning from 9 to 12, and the afternoon 2 to 5.

2. MENTAL AND MORAL PHILOSOPHY.

The Lectures are devoted mainly to Ancient Philosophy in the Third Year, to Modern Philosophy in the Fourth. In addition to the Lectures, the Examination will comprise the first four of the following subjects in the Third Year, the last eight in the Fourth :—

1. Schwegler's History of Philosophy, Chapters 1-21 inclusive.
2. Cicero's De Natura Deorum.
3. Fraser's Selections from Berkeley.
4. Thomson's Outlines of the Laws of Thought.
5. Aristotle's Nicomachean Ethics.
6. Descartes' Method and Meditations.
7. Spinoza's Ethics.
8. Watson's Philosophy of Kant in Extracts.
9. Murray's Outline of Hamilton's Philosophy.
10. Mill's System of Logic.
11. Spencer's First Principles.
12. Maine's Ancient Law.

N.B.—The class-essays of candidates for honours are expected to display superior ability in the discussion of philosophical subjects.

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3. ENGLISH LANGUAGE, LITERATURE AND HISTORY.

The examination for Honours in the Third Year will be on the works in the following course :—

Language.—Anglo-Saxon.—Portions of Sweet's Anglo-Saxon Reader.
Early English.—Specimens of Early English (Clarendon Press Series, ed. Morris and Skeat), Part II., extt. I.-IX. inclusive.

Literature.—Chaucer.—The Prologue to the Canterbury Tales, The Knight's Tale (Clarendon Press Series, ed. Morris).

Spenser.—The Faerie Queene, Book I.

Sidney.—An Apologie for Poetry. (ed. Arber, to be obtained by post from the Editor, 1 Montague Road, Edgbaston, Birmingham, price 6d.)

Milton.—Shorter English Poems; Areopagitica (ed. Hales).

Dryden.—Annus Mirabilis; Absalom and Achitophel, Pt. The Preface to the "Fables."

Addison Essays on Milton's Paradise Lost and on the Imagination. (Spectator.)

Wordsworth.—Prelude (Moxon's edition).

Leslie Stephen.—English Thought in the Eighteenth Century, vol. II. cap. X., sections V.-X., inclusive.

History.—The Lectures on Constitutional History.

Hallam.—Middle Ages, caps. 1, 3, 5.

Macaulay.—Vol. I., cap. 1.

Green.—Reigns of Elizabeth and Charles II. (History of the English People.)

Lectures on the Honour Subjects of the Third Year.

Language.—Anglo-Saxon.—The essentials of the Anglo-Saxon Language and Literature. Text-book—Sweet's Anglo-Saxon Reader (Clarendon Press Series).

Literature.—A course on some of the special Honour subjects.

History.—Honour students are required to attend the Fourth Year course of lectures on European History.

B.A. HONOUR COURSE.

For B.A. Honours, the examination will be on the following subjects :—

Language.—Anglo-Saxon—Portions of Sweet's Anglo-Saxon Reader and of Beowulf (ed. Harrison and Sharp).

Farly English—Specimens of Early English (Clarendon Press Series, ed. Morris & Skeat), Part II., ext. X.-XX., inclusive.

Literature—Shakespeare—Love's Labour's Lost, A Midsummer Night's Dream, Hamlet.

Sir Thos. More.—Utopia (ed. Arber, price 1s).

George Villiers, Duke of Buckingham.—Rehearsal. (ed. Arber, price 1s).

Pope—Essay on Criticism, Essay on Man.

Campbell—The Pleasures of Hope.

Shelley—Adonais, Prometheus Unbound.

Tennyson—Coming of Arthur; Gareth and Lynette; Holy Graal: Passing of Arthur. In Memoriam.

Mathew Arnold—Essays in Criticism (the second).

History.—The lectures of the Fourth Year.

Freeman.—Growth of the English Constitution.

Freeman.—Historical Geography of Europe, caps. 1, 8, 9, 11, 12.

Macaulay, vol. I. cap. 3.

*See Third Year Honour Course.

Lectures on the Honour Subjects of the Fourth Year.

Language—Anglo-Saxon—Sweet's Anglo-Saxon Reader, and Beowulf (ed. Harrison and Sharp).

Literature.—A course on these special Honour subjects, viz.:—the three prescribed plays of Shakespeare; Modern Poetry, with special reference to Tennyson's Idylls of the King, and In Memoriam.

History.—Honour Students are required to attend the course of lectures on Constitutional History.

4. MATHEMATICS AND PHYSICS.

MATHEMATICS.—(*First Year*.)—McDowell's Exercises on Modern Geometry, &c.—Wood's Algebra—Todhunter's Theory of Equations (selected course).

The Honour lectures in the First Year begin after Christmas. Candidates will be examined on the first half of McDowell's Exercises before admission to them.

MATHEMATICS.—(*Second Year*).—Hind's Plane and Spherical Trigonometry—Salmon's Conic Sections, chapters, 1, 2, 3, 5, 6, 7, and 10 to 13, inclusive.—Williamson's Differential and Integral Calculus (selected course).

MATHEMATICAL PHYSICS.—(*Third Year*.)—Minchin's Statics, Vol. I. Williamson & Tarleton's Dynamics, chaps. 1 to 8 inclusive (Dynamics of a Particle).—Besant's Hydromechanics, Part I., Chaps. 1, 2, 3, 7.—Parkinson's Optics.—Godfray's Astronomy.

B.A. HONOUR COURSE.

PURE MATHEMATICS.—Williamson's Differential and Integral Calculus.—Boole's Differential Equations (selected course).—Salmon's Geometry of three Dimensions (selected course).

MECHANICS.—Minchin's Statics, except chapters 14 and 18.—Williamson & Tarleton's Dynamics (the whole, including the Dynamics both of Rigid Bodies and of a Particle).—Routh's Dynamics of a Rigid Body (for reference).—Besant's Hydromechanics.

ASTRONOMY AND OPTICS.—Godfray's Astronomy. Parkinson's Optics.

PHYSICAL ASTRONOMY.—Godfray's Lunar Theory, or Cheyne's Planetary Theory.

Newton's Principia, Lib. I., Sects. 1, 2, 3, 9, and 11.

LIGHT.—Lloyd's Wave Theory of Light.

ELECTRICITY AND MAGNETISM.—Ordinary Course, with Cumming's Theory of Electricity and Maxwell's Elementary Electricity.

HEAT, ACOUSTICS, } As in ordinary course.

Engineering students may be candidates for Honours.

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5. NATURAL HISTORY AND GEOLOGY.

THIRD YEAR.

(1) *Mineralogy*.—Crystallography. Physical properties of minerals dependent upon light, electricity, state of aggregation, etc. Chemical composition. Principles of classification. Description of species important as constituents of Rocks, Blowpipe Analysis and Determinative Mineralogy.

(2) *Lithology.*—Classes of Rocks, Texture and Composition. Description of the more commonly occurring Rocks.

(3) Directions for collection and study in the vacation.

B.A. HONOUR COURSE.

(1) *Mineralogy and Lithology.*—Description of mineral species, particular attention being called to the Economic Minerals of Canada. Calculations of mineralogical Formulæ, Quantivalent Ratios, etc. Essential and accessory constituents of Rocks. Macroscopic and microscopic characters. Preparation of Rock-sections. Microscopic examination of Minerals and Rocks. Principles of classification. Description and determination of Rocks. (One lecture weekly, with occasional demonstrations in the Museum or Laboratory.)

(2) *Canadian Geology.*—Studies of the several Geological formations of Canada with their distribution, subdivisions and characteristic fossils. One lecture weekly with excursions and Museum demonstrations. (Dana's Manual of Geology. Reports of Geological Survey, Dawson's Acadian Geology.)

(3) *Practical Geology.*—Including methods of observing and recording geological facts and of searching for mineral deposits. *Palæontology*, including studies of special groups of fossils. One lecture or demonstration weekly. (Geikie's Field Geology, Nicholson's Palæontology, special Reports and Memoirs.)

Candidates for Honours will be expected to attain to such proficiency as to be able to undertake original investigations in some at least of the subjects of study.

Students in the Faculty of Applied Science may be candidates for Honours.

LECTURES IN THE UNDERGRADUATE COURSE IN THE FACULTY OF ARTS.

SESSION OF 1887-88.

	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
FIRST YEAR.	9	Classics.	† Mathematics. (*b*)	Mathematics.	† Mathematics. (*b*)	Mathematics.
	10	Mathematics.	Classics.	Classics.	Classics.	Classics.
	11	English.	* French.	* French.	* French.	English.
	12	Elementary Chemistry.	* German. * Hebrew.	English.	* German. * Hebrew.	Elementary Chemistry.
SECOND YEAR.	9	* French.	Logic.	* French.	* Hebrew.	* French.
	10	Classics.	* German, Hebrew.	Logic.	Logic.	* German. † Mathematics.
	11	Mathematics.	Classics.	† Mathematics. Botany.	Classics.	Classics.
	12	† Mathematics. Botany.	* German. (*c*)	English.	* German. (*c*)	* Hebrew.
THIRD YEAR.	9	English Literature.	Classics.	† Classics. † Math. Phy.	Classics.	†Classics. † English. (*e*) †Geol.
	10	German. † Math. Physics.	French. † Ment. Phil.	† Anglo-Saxon. (*e*)	French. Theoretical	† Mathematical Physics.
	11	† Mental Philosophy.	Zoology	Physics [Mathematical].	Chemistry. (*e*)	* Syriac, etc.
	12	Mental Philosophy. (*e*)	⸗ Physics [Experimental].	Mental Philosophy. (*e*)	Zoology.	Rhetoric.
	1		Hebrew.	Classics.	⸗ Physics [Experimental].	Physics [Mathematical].
					Hebrew.	German.
FOURTH YEAR.	9	† Math. Physics. † English.	Astronomy. (*a*)	† Classics. Geology.	Astronomy. (*a*)	† Classics.
	10	Geology.	French. † Ment. Phil.	English Literature. (*e*)	† Mental Philosophy.	Geology.
	11	Classics. † Geology.	German.	Classics.	German. History.	
	12	Moral Phil.	Moral Philosophy.		Moral Philosophy.	French. † Geology. Anglo-
	1		Chaldee (*e*)	† Geology. Math. Phy.	Chaldee (*e*)	Saxon and Early English-
			⸗ Physics [Experimental].		⸗ Physics [Experimental].	German. † Math. Physics.
					* Hebrew.	

(*a*) During First Term. (*b*) Second Term. (*c*) For beginners entering 2nd Year. † For Candidates for Honours. (*d*) For Medical and Occasional Students.
* The Student may take at his option French or German in the first two years, or, if a Theological Student, Hebrew. ⸗ From Nov. 1st.
Classes at 1 p.m., may be changed to other hours.
(*e*) Additional Department.
Library open every day, 9 to 4. The Museum will be opened as arranged by the Professor of Natural History.
Determinative Mineralogy, Wednesday, at 2 p.m. Practical Chemistry, Monday and Thursday, at 2 p.m.

Special Course for Women,

IN THE FACULTY OF ARTS.

DONALDA ENDOWMENT.

The classes for women under this endowment are wholly separate, except those for Candidates for Honours (including most of the additional classes in the Third and Fourth Years). The examinations are identical with those for men. Women will have the same privileges with reference to Classing, Honours, Prizes and Medals as men.

In the session of 1887-8 classes will be opened in the Fourth and Final year, in addition to those already established in the first three years.

Regulations for Examinations, Exemptions, Boarding Houses, Attendance, Conduct, Library and Museum will be the same as for men, but not the same for Academic Dress.

The *Jane Redpath Exhibition* is open for competition, at entrance into the First Year, to both men and women.

The income of the *Hannah Willard Lyman Memorial Fund* will be given in prizes.

I. MATRICULATION AND ADMISSION.

In Classics.—Latin.—Cicero, Orations I. and II. against Catiline; or, Virgil Æneid, Book I.; Latin Grammar.

Greek.—Xenophon, Anabasis, Book I.; or, Homer, Iliad, Book I.; Greek Grammar.

Candidates who cannot pass in Greek may substitute an additional modern language in the course.

In Mathematics.—Arithmetic; Algebra, to Simple Equations (inclusive); Euclid Elements, Books I., II., III.

In English.—Writing from Dictation. A paper on English Grammar, *including Analysis.* A paper on the leading events of English History.

An equivalent amount of other books or other authors in Latin and Greek

than those named may be accepted by the Examiners on application made through the Professor of Classics.

PARTIAL STUDENTS.—Candidates unable to pass in all the above subjects may be admitted as Partial Students, in the separate classes; if prepared to enter in three of the subjects of the ordinary course of study they may in the First Year make good their standing as Undergraduates at the Christmas or Sessional Examinations.

OCCASIONAL STUDENTS.—Ladies desirous of taking one or two Courses of Lectures in the separate classes for women, as Occasional Students, may procure from the Secretary of the University tickets for the Lectures they desire to attend.

II. ORDINARY COURSE OF STUDY FOR THE DEGREE OF B.A.

(*In separate classes.*)

First Year.—Classics; French or German; English Grammar and Literature; Pure Mathematics; Elementary Chemistry.

Second Year.—Classics; French or German; English Literature; Elementary Psychology and Logic; Pure Mathematics; Botany.

Third Year.—Latin or Greek; Mathematical Physics (Mechanics and Hydrostatics); with any three of the following departments:—French, German, Experimental Physics, Zoology, English and Rhetoric, Logic and Psychology, Astronomy and Optics, Greek or Latin (if not taken as imperative.) The three subjects chosen must be such as the student has been prepared for by studies in the previous years. For exceptions see rule below under Honour Courses.

Fourth Year.—Latin or Greek (same language as in Third Year); Mathematical Physics (as in Third Year), or Astronomy and Optics; Mental and Moral Philosophy; with any three of the following departments:—French, German, Experimental Physics, Geology, History, Astronomy and Optics, or Mathematical Physics (if not taken as imperative); Greek or Latin (if not taken as imperative). The three subjects chosen must be such as the student has been prepared for by studies in the previous years. For exceptions see rule below under Honour Courses.

HONOUR COURSE AND ADDITIONAL DEPARTMENTS.

(*In mixed classes.*)

Undergraduates desirous to take one of the Honour Courses in Classics, Mathematical Physics, Mental and Moral Philosophy,

English Language and Literature, History, Geology and other Natural Sciences, or such portions of the Honour Courses as constitute the "Additional Department," may in the Third and Fourth Years obtain exemptions to the same extent as those given to men, but must take the same lectures with men.

Details will be found in Section XII. of the Calendar.

III. DEGREES.

Students are admissible to the degrees of B.A., M.A., and LL.D. conferred in the usual way on the usual conditions, and will be entitled to all the privileges of these degrees, except that of being elected as Fellows.

IV. FEES.

Matriculation Fee for the First Year (to be paid in the Year of Entrance only)	$4 00
Sessional Fee	20 00
Library Fee (optional)	4 00

Partial Students, viz., those taking three or more Courses of Lectures, are required to pay the Matriculation Fee, and $5 for each Course which they attend, or $20 for all the Courses.

The above Fees are to be paid to the Registrar of the University, from whom Tickets for the Library and copies of the Library Rules may be obtained.

Occasional Students—$5 for each class.

[Associates in Arts, who, at their special Examination, have passed in Latin, Algebra and Geometry, are not required to present themselves for the Matriculation Examination.]

Exemptions from fees may be allowed to the highest pupil of the Girls' High School of Montreal, and of other Schools, on the same terms as men.

One exemption from tuition fees is annually allowed to the pupil (boy or girl) from the Schools of the Protestant commissioners, Montreal, who has taken the highest marks at the A. A. Examination, and is recommended by the Commissioners.

V. LODGINGS.

Women not resident in Montreal, proposing to attend the classes, and desiring to have information as to suitable lodgings, are requested to intimate their wishes in this respect to the Registrar of the University at least two weeks before the opening of the session.

It is expected that arrangements may be made with some of the Ladies' Schools in the city to receive students desiring accommodation as borders.

N.B.—*The Students will have the aid and oversight of a competent Lady Superintendent.*

LECTURES OPEN TO OCCASIONAL STUDENTS, SESSION OF 1887-8.

CHEMISTRY :—

Dr. Harrington.

Tuesday and Thursday at 12.

BOTANY :—

Prof. Penhallow.

Monday at 3, Wednesday at 12.

ZOOLOGY :—

Sir Wm. Dawson.

Tuesday and Thursday, at 4 p.m.

GEOLOGY :—

Sir W. Dawson and Dr. Harrington.

Tuesday and Thursday, at 2 p.m.

Wednesday, at 10 a.m.

EXPERIMENTAL PHYSICS :—

Dr. Johnson.

Tuesday and Thursday, at 3 p.m.

LOGIC :—

Rev. Dr. Murray and Mr. Lafleur.

Tuesday, Thursday and Friday, at 4 p.m.

METAPHYSICS :—

Rev. Dr. Murray.

Monday and Wednesday, at 4 p.m.

MORAL PHILOSOPHY :—

Rev. Dr. Murray.

Tuesday, Wednesday, and Thursday at 12.

RHETORIC :—

Mr. Lafleur.

Wednesday, at 11 a.m.

ENGLISH :—

Prof. Moyse and Mr. Lafleur.

Language and Literature,

Tuesday, Wednesday and Friday, at 4 p.m.

Literature of Elizabethan and Stuart periods and Shakspeare,

Wednesday and Friday, at 3 p.m. (only one lecture a week before Christmas).

Chaucer,

Monday, at 11 a.m.

HISTORY :—

Prof. Moyse.

Thursday, at 9 a.m.

LATIN AND GREEK* :—

Rev. Dr. Cornish.

FRENCH* :—

Dr. Darey.

GERMAN* :—

Prof. Markgraf.

MATHEMATICS AND MATHEMATICAL PHYSICS* :—

Dr. Johnson and Prof. Chandler.

Those Courses, in which two lectures weekly are delivered, will each amount to about 40 lectures, and the others in proportion.

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* The Lectures on these subjects extend over all the Years of the Course, and the hours will depend on the standing of Students with respect to previous preparation.

FACULTY OF ARTS.

*Ordinary Lectures in the Donalda Special Course for Women.

Years	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
First Year.	12		Chemistry.		Chemistry.	
	2	Mathematics.	French.	Mathematics.	French.	Mathematics.
	3	Latin.	German.	Latin.	Latin.	German.
	4	Greek.	English.	English.	Greek.	English.
Second Year.	10	Mathematics.				
	11	Greek.				
	12			Botany.		
	2	Latin.		Latin.	German.	
	3	Botany.	French.	English.	French.	English.
	4	German.	Logic.	Greek.	Logic.	Logic.
Third Year.	10		Classics.		Classics.	French.
	11	French.		Rhetoric.	German.	
	12	Classics.		Math. Physics.		Math. Physics
	3	German.	Exp. Physics.	English.	Exp. Physics.	
	4	Metaphysics.	Zoology.	Metaphysics.	Zoology.	
Fourth Year. 1887-8.	9				History.	
	10	French.	Astronomy.	Geology.	Astronomy.	French.
	11	German.	Classics.	Geology.	Classics.	
	12		Moral Phil.	Moral Phil.	Moral Phil.	
	2		Geology.		Geology.	German.
	3		Exp. Physics.		Exp. Physics.	

The hours for Practical Chemistry and Additional Botany will be arranged at the beginning of the Session.

*For Honour Lectures see previous table.

Faculty of Applied Science.

THE PRINCIPAL (*ex-officio*).

Professors :— HARRINGTON, BOVEY, McLEOD, CHANDLER.
Assistant :—EVANS.

Associate Professors :—DAWSON, MARKGRAF, JOHNSON, DARBY, MOYSE, PENHALLOW.

Associate Lecturer :—LAFLEUR.

Dean of the Faculty :—HENRY T. BOVEY, M.INST.C.E.

The Instruction in this Faculty is designed to afford a complete preliminary training, of a technical as well as theoretical nature, to such Students as are preparing to enter any of the various branches of the professions of Engineering and Surveying, or are destined to be engaged in Assaying, Practical Chemistry, and the higher forms of Manufacturing Art.

Four distinct Departments of study are established, viz. :

(1).—Civil Engineering and Surveying, (2).—Mechanical Engineering, (3).—Mining Engineering, (4).—Practical Chemistry.

Each of these extends over four, or, under certain conditions, three years, and is specially adapted to the prospective pursuits of the Student.

The Degrees conferred by the University upon such Undergraduates of this Faculty as shall fulfil the conditions and pass the Examinations hereinafter stated, will be, in the first instance, "Bachelor of Applied Science," mention being made in the Diploma of the particular Department of study pursued; and, subsequently, the degrees of "Master of Engineering" or of "Master of Applied Science." (§V.)

Examination for Land Surveyors :—Any graduate in the Faculty of Applied Science, in the Department of Civil Engineering and Land Surveying, may have his term of apprenticeship shortened to one year for the profession of Land Surveyor in

Quebec or Ontario, or for the profession of Dominion Land Surveyor. He must, however, pass the preliminary and final examinations before one of the Boards of Examiners. The former examination should be passed before entering the University, or in the First or Second Year of attendance.

Students in the Civil Engineering Department, who at the beginning of their Fourth Year give notice to the Faculty of their intention to prepare for the examination for Dominion Topographical Surveyors, will receive preparation for that Examination, more especially in Spherical and Practical Astronomy and Geodesy, and may be exempted from the Heat and Hydraulics, or from the designing of the Fourth Year.

Partial Students may be admitted to the lectures and examinations in the above special work.

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§ I. MATRICULATION AND ADMISSION.

1. Candidates for Matriculation must present themselves for examination on the 15th of September, 1887. They may, however, be admitted at a later period of the Session, upon special application, if qualified to take their places in the classes in progress.

JUNIOR MATRICULATION. For entrance into the First Year, the subjects for examination will be:—

Mathematics.—Arithmetic; Algebra, to end of Simple Equations; Euclid's Elements, Books, I., II., III.

English.—Grammar [including Analysis] and Composition.

Associates in Arts who, in the School Examinations of the University, have passed in Geometry and Algebra, will be received as matriculated Students in the First Year.

SENIOR MATRICULATION. For entrance into the Second Year, the subjects for Examination will be:—

Arithmetic.

Algebra.—To the end of Quadratics [as in Colenso's Algebra, Part I]

Euclid.—Books I., II., III., IV., VI. and XI., and the definitions o Book V.

Plane Trigonometry.—Including solution of Triangles, and the use of Mathematical Tables.

Chemistry.—As in Nichol's Abridgment of Eliot and Storer's Manual.

English.—Grammar (including Analysis), Composition and the leading facts of the History of England.

French or German.—(French Grammar and easy translation. German as in Schmidt's German Guide, Part I., and easy translation.

Candidates unable to pass in Chemistry, French or German, may be allowed by the Faculty to enter and take the First Year lectures on Chemistry and German.

Candidates who produce certificates of having already completed a portion of a course in some recognized School of Applied Science may be admitted to an equivalent standing.

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§ II. MEDALS, EXHIBITIONS AND PRIZES.

1. The Lansdowne Silver Medal (the gift of His Excellency The Right Honourable the Marquis of Lansdowne).

The Lansdowne Medal for session 1887–88 will be open for competition to Fourth Year Students of the Mechanical Engineering Course. Candidates must take a first-class general standing in their Ordinary Course, and the Medal will be awarded to the Student who stands first in the Advanced Course. (§iv. B.)

2. The British Association Gold Medal and Exhibition, founded by the British Association for the Advancement of Science, in commemoration of the meeting held in Montreal in the year 1884.

The British Association Gold Medal for session 1887–88 will be open for competition to Fourth Year Students of the Civil Engineering Course. Candidates must take a first-class general standing in the Ordinary Course, and the medal will be awarded to the Student who stands first in the Advanced Course. (§iv. B.)

3. The Scott Exhibition of $66, founded by the Caledonian Society of Montreal, in commemoration of the Centenary of Sir Walter Scott.

Two Exhibitions on this endowment will be offered for competition at the opening of Session 1887–88, namely:—

One to Students entering the Third Year, the subjects of Examination being:—

[*a*] Macaulay's History of England, Vol. I, cap. I; Sir Walter Scott's Lady of the Lake. [*b*] Mathematics. [*c*] Mechanism.

One to Students entering the Second Year, the subjects of Examination being:—

[*a*] Macaulay's History of England, Vol. I, cap. I; Shakspeare's Tempest; [*b*] Mathematics.

4. Two Prizes in Books, each of the value of $25, presented by E. B. Greenshields, B.A., and S. Greenshields, B.A., for the two best Summer Reports or Essays.

5. A prize to Students entering the Third Year, presented by M. J. Sproule, Ma. E. for proficiency in levelling (Running a line of levels and closing on the starting point).

6. A Prize of $25.00 is offered by J. H. Burland, B.A.Sc., to Students entering the Second Year, the subjects of examination being: (*a.*) Inorganic Chemistry; (*b.*) Elements of Organic Chemistry; (*c.*) Practical Chemistry.

7. Prizes or certificates of merit are given to such Students as take the highest places in the Sessional and Degree Examinations.

§ III. SPECIAL PROVISIONS.

1. Partial Students may be admitted to the professional classes upon payment of special fees (§ VII).

2. Undergraduates in Arts may, if allowed by the Faculty of Arts, be admitted to the Professional Classes in Practical Science on payment of the fees for these classes.

3. Students in Applied Science may, by permission of the Faculty, take the Honour Classes in the Faculty of Arts.

4. Students who have passed the Intermediate in Arts, with standing not lower than the Second Class in Mathematics, have the privilege of entering the Second Year in Applied Science, and will be exempted from one of the Departments in the Third and Fourth Years in Arts.

5. Undergraduates in Arts of the Second or Third Years, or Graduates of any University, entering the Faculty of Applied Science may, at the discretion of the Professors, be exempted from such lectures in that Faculty as they may have previously attended as Students in Arts, but must pass all the examinations.

6. Students who fail to obtain their Session, and who, in consequence, repeat the Year, will not be exempted from examination in any of those subjects in which they may have previously passed, except by the express permission of the Faculty. Application for such exemption must be made at the commencement of the Session.

§ IV. COURSES OF STUDY FOR SESSION 1887-88.

A. ORDINARY COURSES.

Civil Engineering.	Mechanical Engineering.	Mining Engineering.	Practical Chemistry.
FIRST YEAR.			
Arithmetic, Euclid.	Arithmetic, Euclid.	Arithmetic Euclid.	Arithmetic, Euclid.
Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.
Geometrical Conics.	Geometrical Conics.	Geometrical Conics.	Geometrical Conics.
Solid Geometry.	Solid Geometry.	Solid Geometry.	Solid Geometry.
Descriptive Geometry. (By permission of the Faculty.)	Descriptive Geometry. (By permission of the Faculty.)	Descriptive Geometry. (By permission of the Faculty.)	Descriptive Geometry. (By permission of the Faculty.)
Freehand Drawing.	Freehand Drawing.	Freehand Drawing.	Freehand Drawing.
Chemistry.	Chemistry.	Chemistry.	Chemistry.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.
SECOND YEAR.			
Mechanism.	Mechanism.	Practical Chemistry.	Practical Chemistry.
Materials.	Materials.	Mechanism.	
Surveying.	Surveying.	Surveying.	
Descriptive Geometry.	Descriptive Geometry.	Descriptive Geometry.	Descriptive Geometry.
Algebra.	Algebra.	Algebra.	
Analytical Geometry.	Analytical Geometry.	Analytical Geometry.	
Calculus.	Calculus.	Calculus	
Mathematical Physics.	Mathematical Physics.	Mathematical Physics.	Mathematical Physics.
Experimental Physics.	Experimental Physics. Ry. Plant & R'g. Stock.	Experimental Physics.	Experimental Physics.
Zoology.	Mechanical Work.	Zoology.	Botany.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.
THIRD YEAR.			
Theory of Structures.	Theory of Structures.	Theory of Structures.	Practical Chemistry.
Materials.	Materials.	Materials.	Theoretical Chemistry.
Surveying.	Machinery & Millwork Ry. Plant & R'g. Stock.	Mining.	Blowpipe Analysis.
Descriptive Geometry	Descriptive Geometry.	Practical Chemistry.	Mineralogy.
Analytical Geometry.	Analytical Geometry.	Blowpipe Analysis.	
Calculus.	Calculus.	Descriptive Geometry.	
Sphl. Trigonometry.		Analytical Geometry.	
Practical Astronomy.		Calculus.	
Mathematical Physics.	Mathematical Physics.	Mathematical Physics.	Mathematical Physics.
Experimental Physics.	Experimental Physics.	Experimental Physics.	Experimental Physics.
Geology & Mineralogy.	Mechanical Work.	Geology & Mineralogy.	Zoology.
Modern Languages.†	Modern Languages.†	Modern Languages.†	Modern Languages.†
FOURTH YEAR.			
Theory of Structures.	Theory of Structures.	Assaying.	Practical Chemistry
Mathematics.	Mathematics.	Mathematics.	Theoretical Chemistry.
	Machinery & Millwork	Metallurgy.	Metallurgy.
	Metallurgy of Iron.	Geology (advanced).	Assaying.
Railway Work.	Ry. Plant & R'g. Stock.	Mineralogy advanced.	Mineralogy.
Heat & Heat-Engines.	Heat & Heat-Engines.	Heat & Heat-Engines.	Geology.
Hydraulics.	Hydraulics.	Hydraulics.	
Graphical Statics.	Graphical Statics.	Graphical Statics.	
Steam Engine.	Steam Engine.	Steam Engine.	
Materials.	Materials.	Materials.	
Designs.	Designs.	Designs.	
Estimates. Spec'ns.	Estimates. Spec'ns.	Estimates. Spec'ns.	
Modern Languages.*	Modern Languages.*	Modern Languages.*	Modern Languages.*

(1) During the summer recess the Students in the 2nd, 3rd and 4rd years are to employ themselves in some practical work (Mechanical Engineering students in a work-shop), and they are also to prepare a report on such work, to be handed in not later than October 1st. Credit will be given for this Report (or Essay) in the subsequent Sessional Examination.

(2) Students are not allowed to take subjects which do not form part of their course, without the sanction of the Faculty.

† English or French or German. * Modern languages not imperative in the Fourth Year.

B. ADVANCED COURSES.

1. CIVIL ENGINEERING.—The higher Mathematics and Mathematical Physics, and the higher branches of Applied Mechanics (*Stiffness and Strength of Materials, Theory of Structures, Heat and Heat Engines, Hydraulics*). Students who have passed a creditable Examination in the Mathematical subjects of the Second Year may enter the Advanced Course of the Third Year, and may be exempted from the Modern Languages of that Year.

2. MECHANICAL ENGINEERING.—The higher Mathematics and Mathematical Physics, and the higher branches of Applied Mechanics (*Stiffness and Strength of Materials, Dynamics of Machines, Heat and Heat Engines*).

3. MINING ENGINEERING.—Study of Ore-Deposits (as in Phillips). Metallurgy. Theory and Practice of Metal-Mining and Ore-Dressing. Special work in mineral analysis, with an Essay thereon.

4. CHEMISTRY.—Organic Chemistry, Industrial Chemistry, Mineralogy and special laboratory work, with an Essay.

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§ V. EXAMINATIONS.

1. FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

1. CHRISTMAS AND SESSIONAL EXAMINATIONS.

There will be a Christmas Examination for Students of the First Year in all the subjects, and for Students of the Second, Third and Fourth Years in Mathematics, and in those subjects which they take in the Faculty of Arts. A Sessional Examination in all the subjects will be held at the end of the First and Second Years.

2. DEGREE EXAMINATIONS.

(*a*) There will be a Primary Examination at the end of the Third Year in all the subjects of that year. Candidates must pass this Examination before entering the Final Year.

(*b*) There will be a Final Examination for the degree of Bachelor of Applied Science at the end of the Fourth Year in all the subjects of that year.

The General Classification for the Degree Examination will be under two heads, viz. :—

First, those who have satisfied the Examiners in the Advanced Courses, in order of merit.

Secondly, those who have satisfied the Examiners in the Ordinary Courses, in order of merit.

Special Certificates may be given for proficiency in particular subjects.

Certificates may be given to Students who have passed the Special Courses added to the curriculum.

Students who take their Degree in one of the Courses provided by the Faculty of Applied Science may obtain credit in either of the remaining Courses by attending one or more subsequent Sessions, the necessary provision for which will be made.

II. FOR THE DEGREE OF MASTER OF ENGINEERING.

Candidates must be Bachelors of Applied Science of at least three years standing, and must produce satisfactory certificates of having been engaged during that time upon *bona fide* work in either the Civil, Mechanical, or Mining Branch of Engineering.

They must pass with credit an Examination extending over the general Theory and Practice of Engineering, in which papers will be set having special reference to that particular branch upon which they have been engaged during the three preceding years.

Candidates must present applications for Examination, together with the necessary certificates and fees. The Faculty will notify the candidates whether their certificates are satisfactory, and also of the date of the Examination.

III. FOR THE DEGREE OF MASTER OF APPLIED SCIENCE.

Candidates must be Bachelors of Applied Science of at least three years standing, must present certificates of having been employed during that time in some branch of scientific work, and must pass with credit an Examination on the Theory and Practice of those branches of scientific work in which they may have been engaged. The other conditions as under the last heading.

§ VI. ATTENDANCE AND CONDUCT.

The regulations under this head are in all respects the same as those in force for Undergraduates in Arts.

MCGILL UNIVERSITY LIBRARY

§ VII. LIBRARY AND MUSEUM.

Students in this Faculty have the same privileges with reference to the Library and Museum as Undergraduates in Arts.

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§ VIII. FEES.

In the Course of Civil Engineering.—$45; Library, $4. In all $49 for each Session.

In the Course of Mechanical Engineering.—$45; Library, $4. In all $49 for each Session.

In the Course of Mining Engineering.—1st Year, $45; 2nd, 3rd and 4th Years $55; Library, $4. In all $49 to $59 for each Session.

In the Course of Chemistry.—1st Year, $45; 2nd, 3rd and 4th Years, $55; Library, $4. In all $49 to $59 for each Session.

Matriculation Fee, for the First and Second Years, $5.

Fee for Degree of Bachelor of Applied Science.—$10.

Fee for Degree of Master of Engineering or Master of Applied Science.—$25.

If for any Special reason the degree of Ma. E. and M. A. Sc. be granted *in absentia* the fee will be $40.

The fees must be paid to the Secretary, and the ticket shown to the Dean within a fortnight after the commencement of attendance in each session. In case of default, the student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty on payment of a fine o $1.

The B. A. Sc. fee must be paid before the final Examinations.

Laboratory Students are required to purchase their own chemicals, &c. The larger articles of apparatus will be supplied by the Laboratory, the Students being responsible for breakage.

Partial students may be admitted to the Professional Classes in any year, by payment of the ordinary fees for that year; or they may attend the lectures on any subject by payment of a fee of $5 for each term,* except in the case of Chemistry, for which a fee of $10 for each term is required.

Graduates in the Faculty of Applied Science may take further courses on payment of half the ordidary tuition fees.

Students taking Blowpipe Analysis, when it does not form part of their course, are required to pay a fee of $5.

Partial Students may attend the course of Instruction in Meteorology on paying a fee of $5.

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* The first term ends with the Christmas examinations, the second with the Sessional.

§ IX. COURSES OF LECTURES.

I. CIVIL ENGINEERING AND APPLIED MECHANICS.

Professor :—HENRY T. BOVEY, M.A., M.INST.C.E.

Civil Engineering.

The course of instruction in Civil Engineering will include the following :—Mechanism, Earthwork, Masonry, Carpentry, Structures of Timber, Stone and Iron, the Construction of Common Roads, Rail-Roads, Bridges, Viaducts, Tunnels, Canals, River, Harbour and Sea Works, Drainage Works, Lighthouses, Works connected with Irrigation and Water Supply, etc.

Applied Mechanics.

The subject of Applied Mechanics will be treated under two heads :—

(*a*). The Strength of Materials, embracing a study of Work, Inertia, Energy and Entropy, the Strength, Stiffness, and Resilience of Materials, Beams or Girders, Pillars, Shafts, Structures (*simple and complex*), Earthwork, Retaining Walls and Arches.

(*b*). Hydraulics, comprising the Theory of Hydrostatics and Hydrodynamics, the Flow of Liquids through Orifices, Pipes and Canals, the Action of a Stream on inclined or curved Vanes (*fixed or revolving*), Hydraulic Machines (*Pressure Engines, Vertical Water Wheels, Turbines, Centrifugal Pumps*), Pneumatics.

Heat and Heat-Engines.

The course of instruction in this Department will embrace :—The General Description of the Steam Engine, the Theory of Heat, the Application of Heat to Thermal Machines, the Production of Heat and Steam, and also :—

(*a*). The movement and distribution of Steam, including the action of Steam in a Cylinder, the methods and regulation of the distribution of Steam, Systems of Cut-off, the general disposition of Cylinders, Condensers, &c.

(*b*). The modes of transmission and a consideration of certain special machines.

(*c*). The construction of an Engine, under which head will be considered Rivets, Bolts, Screws, Sockets, Keys, Cylinders, Pistons, Organs of Distribution, Organs of Transmissions.

(*d*). The construction of Special Machines.

Designs, Estimates, &c.

Engineering Students will also prepare designs, specifications, and estimates of such works as are usually undertaken by the Engineer.

Each Student works independently, under the personal supervision of the Professor of Engineering, and makes such drawings and calculations as would be needed were the structure designed to be actually carried out.

II. MECHANICAL ENGINEERING.

Professors :— { HENRY T. BOVEY, M.A., M.I.M.E.
C. H. MCLEOD, MA.E., M.C.Soc.C.E.

Mechanism.

The lectures on Mechanism will treat of:—The object and structure of a machine, conversion and modification of motion, aggregation of motion, velocity ratios, linkwork, the teeth of wheels and trains of wheels, indicator diagrams and measurement of H. P., escapements, connections, various elementary combinations. Shop visitation by the class.

Theory of Machines.

This Branch will comprise :—

(*a*). *The transmission of Work*, including the measurement of work, the efficiency of machines, dynamical friction, viscosity, and the methods of transmitting work (*by continuous rotation, oscillation, belts, water, and compressed air*).

(*b*). *The modification of Work and Stores of Energy*, embracing a study of the actual energy of moving pieces, springs and weights.

(*c*). *Governing and Controlling Machines*, including a consideration of uniform effort, variable resistance, machines driven by fluid pressure, differential governors.

(*d*). *Balancing Machinery.*

Mechanical Work.

A course of lectures will be given on the following specific Departments of Mechanical Engineering, and will treat entirely of the principles and results of actual practice :—The different classes of machinery, Belts, Gearing, Forging, Hammers, the Tempering of Steel, Tools, Vice-work, Fitting and Finishing, Lathes and Lathe-works, Planing, Slotting and Shaping Machines, Boring and Drilling, Milling and Milling tools, Screw-cutting, the Slide valve, Standard Measures, Gauging Implements, Riveted Joints, Fastenings, Pipes and Cylinders, Journals, Bearing, Shafting, Linkwork, Pistons and Stuffing Boxes, Lubricators, Moulding and Founding.

Students before obtaining their degree in this course must present certificates of having been employed for at least eight months in Mechanical work-shops.

Railway Plant and Rolling Stock.

SECOND, THIRD AND FOURTH YEARS :—During session 1887-88,

Mr. P. J. Bolland, M.C.Soc.C.E., of the Grand Trunk Railway Mechanical Engineering staff, will give a course of lectures at the Grand Trunk Works on :—

The construction of the framing and trucks of various classes of cars ; couplings ; brake-fittings, &c. ; running shed and water-station plant ; water cranes, tanks and hydrants ; turntables ; traversers ; cranes, hoists and lifts ; jacks, &c. ; workshop appliances, embracing steam-hammers, nut and bolt machinery, cupolas, brass-furnaces, plate furnaces, boring machines, gauging, shaping machinery, etc. ; engine and tender details, (continued from last session.)

III. MINING ENGINEERING.

Professor :—B. J. HARRINGTON, B.A., PH.D.

The object of this course is to give Students a knowledge of the characters and mode of occurrence of various economic minerals, together with the methods employed for their extraction and subsequent treatment.

The lectures on Mining are given during the Third Year, and among the subjects taken up the following may be mentioned :—Blasting and the nature and use of different Explosives, Quarrying, Hydraulic Mining, Boring; the Sinking, Timbering and Tubbing of Shafts; Driving and Timbering of Levels, Underground Conveyance and Hoisting, Drainage and Pumping, Lighting and Ventilation of Mines, special methods of Exploitation employed in the working of Metalliferous Deposits or of Coal Seams, &c. During this year, also, instruction is given in Blowpipe Analysis, the object of which is to enable Students by means of the blowpipe and a few simple re-agents to detect the nature of different Minerals or Ores. On account of the small quantity of apparatus required, and the rapidity with which accurate results may be arrived at, a knowledge of this subject will be found most useful to those engaged in geological or other field-work.

In the Fourth Year a short course of lectures on Metallurgy is given, and assays are made of various Ores, Fuels, &c.

NOTE.—The lectures on Mining and Metallurgy are illustrated by a series of Models.

IV. DESCRIPTIVE GEOMETRY AND SURVEYING.

Professor :—C. H. MCLEOD, MA.E.

Descriptive Geometry.

SECOND YEAR.—(1).—Linear Drawing. (2).—Orthographic projection, including penetrations, developments, sections, etc.

THIRD YEAR.—(1).—Orthographic projection (continued). Tangent planes and normals. Curved surfaces. Graphical determination of spherical triangles. (2).—Spherical projections, including the construction of maps. (3).—Axometric projection. Isometric projection. (4).—Shades and shadows. (5).—Mathematical perspective. Perspective of shades and shadows.

Surveying.

This course is designed to qualify the Student for admission to the practice of Provincial and Dominion Land Surveying. It also affords a practical and theoretical training in field engineering.

SECOND YEAR.—Chain Surveying, Compass Surveying. The use and adjustment of the Transit, Theodolite, Level (Dumpy, Y, and other forms), Sextant, Aneroid Barometer, Plane-table and other field instruments. Contour Surveying. Underground Surveying. Plotting. Practical operations in the field. Calculating areas.

THIRD YEAR.—Topography. Methods of Setting out Work. Curves. Indirect and Barometric Levelling. Hydrographic Surveying. Geodetic Surveying. Practical operations in the field.

NOTE.—The field work is carried out under the personal supervision of the Professor, and is as follows :—(*a*) a chain survey, (*b*) an angular survey, (*c*) a contour survey, (*d*) the location of a line of road, including preliminary surveys, ranging curves, levelling and setting out the work, (*e*) a hydrographic survey. Each student is required to make field notes, and from these to plot all plans and sections required in connection with the above.

At the close of the sessional examinations there is also an optional course for the 3rd year in astronomical observations and triangulations. The former includes latitude, longitude (by lunar culminations), azimuth and time.

FREEHAND DRAWING.

FIRST YEAR.—Instruction in Freehand Drawing is given by Mr. J. H. Bowe. Students in Arts may attend the classes in Freehand Drawing on payment of a fee of $1 per term.

V. CHEMISTRY AND ASSAYING.

Professor :—B. J. HARRINGTON, B.A., PH.D. (Greenshields Professor of Chemistry and Mineralogy.)

Assistant : NEVIL N. EVANS, B.A. SC.

A course of Lectures, illustrated by experiments, is given to all students of the First Year in Applied Science on the Laws of Chemical Combination, Chemical Formulæ and Equations, the preparation and properties of the more important non-metallic and metallic Elements and many of their Compounds, and on the elementary principles of Organic Chemistry. Students taking these lectures must also devote one afternoon a week during the first term, and two afternoons a week during the second term, to practical work in the laboratory.

In the Second and Third Years of the Mining Course instruction will be given in Qualitative and Quantitative Analysis, and Chemistry Students of these years will attend a course of lectures on either Theoretical or Organic Chemistry. In the Fourth Year Mining Students will devote themselves chiefly to Mineral Analysis and Assaying, while Practical Chemistry Students may substitute Organic Analysis and the preparation of Organic Compounds for these subjects.

The laboratory is open daily (Saturdays excepted) from 9 a.m. to 1 p.m., and from 2 to 5 p.m.

VI. GEOLOGY.

Professor :—SIR J. W. DAWSON, LL.D., F.R.S. (Logan Professor of Geology.)

Assistant Professor :—B. J. HARRINGTON, B.A., PH.D., F.G.S.

SECOND YEAR.—A preliminary Course in Zoology, with special reference to Fossil Animals.

THIRD YEAR.—Mineralogy (Ordinary and Honour), Lithology, Physical and Chronological Geology and Palæontology, Geology of Canada, Methods of Geological Exploration.

FOURTH YEAR.—Special Studies in Mineralogy and Lithology, Advanced Course in General Geology and Palæontology, Geology of Canada, Practical Geology and Field-work.

NOTE.—Students in the Mining and Chemistry Courses take the Honour Mineralogy of the Third Year. Mining Students alone take all the subjects of the Fourth Year; Chemistry Students only the Mineralogy and Lithology.

VII. BOTANY.

Professor :—D. P. PENHALLOW, B.Sc.

Course.—General Morphology and Classification. Descriptive Botany. Flora of Canada. Nutrition and reproduction of plants. Elements of Histology.

VIII. MATHEMATICS AND MATHEMATICAL PHYSICS.

Professor :—G. H. CHANDLER, M.A.

The lectures in this course are specially designed to meet the requirements of Students of Applied Science ; those in Mechanics being introductory to Applied Mechanics. The subjects are as follows :—

FIRST YEAR.—(1) Euclid, six books. (2) Loci, Transversals, &c. (3) Algebra, to Progression. (4) Plane Trigonometry and the use of Mathematical Tables. (5) Elements of Solid Geometry. (6) Geometrical Conic Sections.

SECOND YEAR.—(1) Algebra continued. (2) Analytical Geometry. (3) Differential and Integral Calculus. (4) Mechanics.

THIRD YEAR.—(1) Mechanics continued. (2) Spherical Trigonometry. (3) Spherical and Practical Astronomy. (4) Revision and continuation of Analytical Geometry and Calculus, with applications to Mechanics, &c.

FOURTH YEAR.—Revision of Analytical Geometry and Calculus.

IX. EXPERIMENTAL PHYSICS.

Professor :—ALEXANDER JOHNSON, LL.D. (Peter Redpath Professor of Natural Philosophy.)

Students in this Faculty are required to take the course in Experimental Physics provided by the Faculty of Arts.

The subjects for the Session 1887-88 are Light and Heat.

X. ENGLISH LANGUAGE AND LITERATURE.

Professor:—CHARLES E. MOYSE, B.A. (Molson Professor of English Language and Literature.)

Lecturer.—PAUL T. LAFLEUR, B.A.

FIRST YEAR.—English Language and Literature.
SECOND YEAR.—A special course on English Composition.
THIRD YEAR.—A special course on English Composition.

XI. FRENCH OR GERMAN.

German:—Professor C. F. A. MARKGRAF, M.A.
French:—Professor P. J. DAREY, M.A., B.C.L.

Students of this Faculty are required to take the course in one of these languages provided by the Faculty of Arts.

XII. METEOROLOGY.

Instruction in Meteorological Observations will be given in the Observatory at hours to suit the convenience of Senior Students.

Certificates will be granted to those Students who pass a satisfactory examination on the construction and use of Meteorological Instruments, and on the general facts of Meteorology.

N.B.—Students of the Second, Third and Fourth Years will be required to answer satisfactorily a weekly paper on such subjects of the course as shall be determined by the Faculty.

SPECIAL NOTICE.

The following gentlemen have kindly consented, by request of the Faculty, to deliver lectures on professional subjects of current interest, during the Session 1887-88:—Dr. T. Sterry Hunt, LL.D. (Cantab), F.R.S., M.Inst.C.E.; T. C. Keefer, M.Inst.C.E.; W.Shanly, M.Inst.C.E.; John Kennedy, M.Inst.C.E.(Chief Engineer Montreal Harbour Works); H.Wallis, M.I.M.E. (Mech.Supt.G.T.R.); P. A. Peterson, M. Inst. C. E. (Chief Engineer C. P. R.); H. D. Lumsden, M. Inst. C. E.; A. T. Taylor, M.R.I.B.A.; F. L. Wanklyn, M. I. M. E. (Asst. Mech. Supt. G. T. R.); P. W. St. George (City Surveyor); J. D. Barnett, M. I. M. E., (Asst. Mech. Supt. G.T.R.); W. J. Sproule, Ma.E., M.C.Soc.C.E.; St. George Boswell, B. A. Sc., M.C. Soc. C.E.; W. B. Dawson, M.A. Ma. E., Grad. Ec. Ponts et Chaussées, As. Mem. I.C. E.; W.T. Skaife, B.A.Sc.

§ X. TEXT BOOKS.

Civil Engineering and Applied Mechanics:—Bovey, Rankine, *Collignon, *Weisbach, *Van Buren, Reuleaux.

Machinery, etc.:—Goodeve (new edition), *Willis, Rankine, Kennedy, *Knight, Rose, *Shelley, *Fairbairn, Unwin.

Heat and Heat Engines:—Maxwell, Tait, *Clausius, Rontgen, Wilson, Rankine, Rigg, Marks.

Moulding and Founding:—Overman.

Materials:—Notes on Building Construction, *Gilmore, Thurston.

Descriptive Geometry:—Millar's Descriptive Geometry.

Surveying:—Gillespie's Land Surveying.

Geology:—Dana's Geology, Dawson's Handbook of Zoology and Lecture Notes on Geology, *Nicholson's Palæontology, *Geological Survey Reports, *Dawson's Acadian Geology.

Mineralogy:—Dana's Manual, *Dana's Descriptive Mineralogy.

Blowpipe Analysis:—Brush's Determinative Mineralogy and Blowpipe.

Botany:—Gray and Bessey.

Chemistry:—Nichol's Abridgment of Eliot and Storer's Manual of Chemistry, Remsen's Compounds of Carbon, Jones' Junior Course of Practical Chemistry, Fresenius' Manuals of Qualitative and Quantitative Analysis, *Watts' Dictionary of Chemistry, *Roscoe & Schorlemmer's Treatise on Chemistry, *Miller's Elements of Chemistry.

Metallurgy:—Greenwood's Manual of Metallurgy.

Assaying:—Ricketts' Notes on Assaying, Chapman's Assay Notes.

Mathematics:—Todhunter's Euclid, Colenso's Algebra (Part 1), Hamblin Smith's Trigonometry, Wilson's Solid Geometry and Conic Sections, Briggs's Analytic Geometry, Peck's Calculus, Goodeve's Principles of Mechanics, Chambers' Practical Mathematics, Chambers' Mathematical Tables.

TABLE OF LECTURES.

Years	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
First Year.	9			Mathematics.	Mathematics.	Mathematics.
	10	Mathematics.	Mathematics.			
	11	English.	French.	French.	French.	English.
	12	Chemistry.	German.	English.	German.	Chemistry.
	2		Pract. Chem. (2nd. Term).	† Freehand Drawing.		Pract. Chem.
	3		Do	Do		Do.
						Do.

* *Books of Reference.*

† The Freehand Drawing Class is also held from 9 to 11 on Saturdays.

TABLE OF LECTURES—(*Continued*).

Years	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
SECOND YEAR.	9	French.		French. German.	Materials.	{French. {German. (1)
	10	Surveying.	German. (2)	Surveying.	{Theor. Chem. {Mathematics.	German. (2)
	11	Mathematics.	Zoology.	Mathematics. Botany. †	Zoology.	Mathematics.
	12	Botany. †	Exp. Physics.	German. (1)	Exp. Physics.	English.
	2	Pract. Chem Drawing.	Mechanism.	Pract. Chem. ‡ Drawing.	Drawing. Prac. Chem.	Mechanism.
	3	Drawing.	Drawing.	‡ Drawing.	Do	Drawing.
	4	Do			Do	Do
THIRD YEAR.	9	Theory of Structures.	Mathematics.	Geology. Machinery.	Materials.	German.* Machinery.
	10	Geology. Machinery.	French. German. (2)	Mathematics.	French. German. (2) Theor. Chem.	Geology.
	11	Theory of Structures. (Advanced).	English.	German. (3)	Theory of Structures.	German. (3)
	12	Machinery.	Exp. Physics.	German.	Exp. Mech.	Mathematics.
	2	Surveying. Pract Chem.	Theory of Structures.	{Blowpipe. {Analysis.	Pract. Chem. Surveying.	Theory of Structures.
	3	Drawing.	Drawing.		Drawing.	Drawing.
	4	Mech. Work. Drawing.	Drawing. Mining.		Mech. Work. Drawing.	Do
FOURTH YEAR.	9	Theory of Structures.	Designing.	Designing.	Materials.	Designing.
	10	Theory of Structures.	* Metallurgy. Designing.	Do	Theory of Structures.	Designing. *
	11	Theory of Struct's. (adv) Geology.*	Do	Geology. *	Theory of Structures.	Geology.*
	12	Machinery. Mathematics.	Do		Theory of Strct. (Advanced). Machinery.	Mathematics.
	2	Pract. Chem. Assaying. Designing.	Theory of Structures. Pract. Chem.	Pract. Chem.	Pract. Chem. Assaying. Designing	Theory of Structures.
	3	Do	Hydraulics. (*a*) Steam. (*a*)	Do	Do	Hydraulics. (*a*) Steam. (*a*)
	4	Do	Do	Do	Do	Do

* For Mining and Chemistry Students. (*a*) Steam during first term; Hydraulics during second term.

Field work for Students of the 2nd year on Mondays, Tuesdays, Wednesdays and Thursdays; for Students of the Third Year on Mondays, Wednesdays and Thursdays, during the months of September and October.

† For Practical Chemistry Students. ‡ For Mining Student only.

In accordance with last year's announcements a series of very valuable lectures, illustrated by numerous diagrams, working drawings, etc., have been delivered before the Engineering classes by some of the most eminent engineers of Canada. The following is a short resumé of the lectures :—

LECTURE No. 1.—BY JOHN KENNEDY, ESQ., M.INST.C.E., M.C.SOC.C.E.

WATER WORKS PUMPING MACHINERY.—The lecture opened with a discussion of the various types of valves, proceeding from the simple disc and hinged valves to the more complicated kinds, and shewing particularly the means by which ease in lifting and closing, and durability in the valve, were sought to be attained in the different kinds. The height of lift of valves as regards the time required to close them, some of the devices for closing them quickly, and the necessity for the simultaneous closing of the valve and the completion of the stroke of the piston, were then pointed out.

Different types of pumps and their chief details were described ; the relation of piston or plunger speed and valve capacity, and the fitness of different kinds of pumps for different requirements of service were fully discussed.

Following this came a short description of the most prominent types of pumping machinery, with remarks upon the distinguishing features of each, the lines on which improvements have been made, and the means by which economy in cost of construction and working had been sought.

LECTURE No. 2.—BY J. DAVIS BARNETT, ESQ., M.I.M.E., M.C.SOC.C.E.

RAILWAY BRAKES.—Are to destroy centrifugal and horizontal momentum. Skidding wheels on rail not effective. Reluctance to apply brakes on locomotive not justified. Requirements of train and engine brakes. Early crude designs. The plenum air system of Westinghouse. The vacuum systems of Eames, Saunders, Smith and Gresham-Craven. Several hydraulic systems and their development. Heberlin through cord, Le Chatelier counter pressure, and electric systems.

The whole a very varied problem in power transmitting mechanism, fully solved in air systems by use of flexible hose capable of variation in all possible planes.

LECTURE No. 3.—BY F. L. WANKLYN, ESQ., M.INST.M.E., M.C.SOC.C.E.

ON THE DIFFERENCES IN DESIGN AND CONSTRUCTION BETWEEN BRITISH AND AMERICAN LOCOMOTIVES.—The lecturer, having contrasted the rigid and flexible wheel bases, pointed out the distinctive advantages and disadvantages of "inside cylinders," and "crank axles." He then discussed the English and American usage as to the position of the valve-seats, main valves and steam chests

over the cylinders. After describing the use of "balanced-valves" and "rocker arms," the different types of valve gear, the frames, wheels and spring gear, the boiler, fire-box, &c., and having remarked upon the superiority in workmanship of an English locomotive, the lecturer concluded with suggestions as to the design which would render a locomotive of moderate first cost, accessible for inspection and repairs and efficient in its driving powers.

Lecture No. 4.—By T. Sterry Hunt, Esq., LL.D. (Cantab), F.R.S., &c.

The Iron Industry.—Dr. Hunt's lecture embraced a most comprehensive account of the progress and development of the iron and steel industry in this country.

Lecture No. 5.—By G. H. Massy, Esq., M.C.Soc.C.E.

Foundations of the St. Lawrence Bridge at Lachine.—This lecture embraced descriptions of (*a*) the hydrographic survey made to locate the sites of the bridge piers; (*b*) the preparation of the pier-beds; (*c*) the method of towing, fixing, holding and sinking the caissons in place; (*d*) the preparation, quality and manipulation of the concrete and masonry; (*e*) the experiments carried out upon models with a view of determining the force of the current upon the caissons.

Lecture No. 6.—By C. E. Dodwell, Esq., M.C.Soc.C.E.

Concrete.—The lecturer having given a very complete description of concrete—its composition, properties and uses—and having generally explained the various methods employed in its manipulation, proceeded to discuss more particularly its application to the foundations of the bridge at Ste. Anne de Bellevue. This included the process of excavating and preparing the pier-sites, the design and use of the timber caissons, and the method of making them watertight, the preparation of the concrete and the laying it in water, the raising the concrete to the proper level, and finally the amount and cost of the material in the piers.

Lecture No. 7.—By P. W. St. George, Esq., M.C.Soc.C.E.

Drainage.—After remarking upon the effect of natural position, climate, soil and configuration, the lecturer gave a detailed explanation of the method of designing tile pipe and brick sewers, and of the various considerations which govern such design. He then contrasted the respective merits of the two systems, pointed out the importance of sound joints, explained how they were made, and gave a general description of the foundation work required in different soils. The lecture concluded with a sketch of the manner of constructing sewer branches.

LECTURE No. 8.—BY H. WALLIS, ESQ, M.I.M.E., M.INST.C E., M.C.SOC.C.E.

THE LOCOMOTIVE BOILER.—Is the same in general design as Stephenson's original model, although improvements have been made in its construction, and its capacity has been increased. The lecturer, after remarking upon the superiority of a cylindrical barrel and a square fire box, the necessity and use of gussets and stay-bolts, and the advantages of internal tubes, pointed out the respective merits of drilled and punched rivet holes, and gave a brief description of the advantages derived from constructing boilers of mild steel.

LECTURE No. 9.—BY G. H. HENSHAW, ESQ., M.C.SOC.C.E.

SOME POINTS IN PRACTICAL CIVIL ENGINEERING.—This lecture was intended to show the difference between a true "practical engineer," and the popular idea attached to that term.

It gave a series of rules to guide engineers in a rapid and accurate execution of work, of which habits of forethought and observation form an important part. It illustrated these by a description of a mode, partly original, of conducting a preliminary railway survey.

It also described the mode generally adopted in European countries for settling by a standing commission all questions arising between the railway and the public or private interests involved.

LECTURE No. 10.—BY J. W. SCHAUB, ESQ., M.A.SOC.C.E.

IRONWORK OF ST. LAWRENCE BRIDGE AT LACHINE.—1. How lengths of spans were adopted. 2. Swing bridge over Lachine Canal, rim bearing contrasted with pivot bearing draw-bridges. 3. General design of the deck and channel spans. 4. Four spans, including two channel spans, continuous over five supports. 5. Why present form was used. 6. The use of the cantilever principle in raising the spans only. 7. Formulæ used in calculating strains from moving loads. 8. Dead load strains by cantilever. 9. Objections to any continuous girder. 10. Adjustment provided for in case piers get out of level. 11. Use of butt-links where strains cross any pier. 12. Formulæ used for calculating posts. 13. Form of post used compared to others.

N.B.—The headquarters of the Canadian Society of Civil Engineers has been established in Montreal. The Society holds fortnightly meetings, at which practical current engineering subjects are read and discussed. Undergraduates joining the Society as students may take part in these meetings, and acquire knowledge of the utmost importance in relation to the practical part of the profession.

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Faculty of Medicine.

THE PRINCIPAL (ex-officio).

Professors:

WRIGHT,	ROSS,	WILKINS,
HOWARD,	RODDICK,	PENHALLOW,
MACCALLUM,	GARDNER,	MACDONNELL,
CRAIK,	SHEPHERD,	MILLS,
FENWICK,	BULLER,	CAMERON.
GIRDWOOD,	STEWART,	

Dean.—R. P. HOWARD, M.D.
Registrar.—J. STEWART, M.D.
Librarian.—F. J. SHEPHERD, M.D.

The Fifty-fifth Session of the Faculty will be opened on Monday, October 3rd, 1887, by an introductory lecture at 3 p.m. The regular lectures will begin on October 4th at the hours specified in the time-table, and will be continued for six months.

The Medical School of McGill University was founded in 1824, as the "Medical Institution," by Drs. John Stephenson, Andrew F. Holmes, William Robertson and William Caldwell. In 1829 the Medical Institution became the Medical Falculty of McGill College. There were no Sessions during the political troubles, from 1836 to 1839, and it is owing to this gap that the present is the 55th Session of the Faculty. In reality this is the 59th Session of the school, which is the direct continuation of the Medical Institution.

The new building of the Medical Faculty, which was opened in the year 1885, is one of the most complete structures of its kind on this continent or elsewhere. It has been found admirably adapted for the fulfilment of the great aim of the Faculty—to make the teaching of the primary branches as practical and as thorough as possible. The facilities now possessed by the Faculty for the above purpose are equal to those of the most advanced European medical schools.

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Through the great liberality of Sir Donald A. Smith in founding "the Leanchoil Endowment," and of the citizens of Montreal and Medical Graduates in subscribing to the "Campbell Memorial Fund," the Faculty are enabled much more thoroughly to conduct and maintain the teaching of the different branches of the medical course in an ample state of efficiency.

LABORATORIES, &c.

In addition to the laboratories and dissecting room, there are two large lecture rooms, each capable of comfortably seating 300 students, and one small demonstration room for classes of 50 and under. The space allotted to the library and museum has been largely increased. A large reading room, waiting and cloak rooms, have been provided for students.

DISSECTING ROOM.

The Dissecting Room, which is situated on the second floor, is 76 feet in length and 31 feet in breadth. It is furnished with twenty tables, and is well lighted for work during the day and night. In procuring appliances for the comfort and convenience of the students, no reasonable expense has been spared.

In connection with the dissecting room, there is a "Bone room," where students have an excellent opportunity of studing osteology. There are also two distinct rooms for the demonstrators of anatomy.

PHYSIOLOGICAL LABORATORY.

The Physiological Laboratory, which is situated on the ground floor, is supplied with the most modern apparatus for the practical teaching of this most important branch of the medical curriculum. It contains amongst other valuable instruments: kymographs, various manometers, &c., for demonstrating blood pressure; myographs, rheocords, moist chambers, &c., and various electrical appliances for demonstrating experiments in connection with nerve and muscle; special apparatus for illustrating various points in respiration; apparatus specially suitable for demonstrating the processes of digestion, as well as the chemical composition and nature of the secretions, and the chief constituents of the tissues and nutritive fluids. The laboratory is arranged in such a way as to permit of students assisting

at, and taking part in, these demonstrations. During the present summer considerable additions will be made to the physiological apparatus.

HISTOLOGICAL LABORATORY.

The Histological Laboratory is a large, well lighted room on the second floor. It is so arranged that over eighty students can be present at the microscopical demonstrations. For this purpose it is supplied with thirty-five microscropes, all from the well-known makers, Zeiss, Hartnack and Leitz. From the large number of microscopes employed, students will have special facilities in studying and making themselves thoroughly acquainted with the specimens that are the subjects of demonstration.

PHARMACOLOGICAL LABORATORY.

The Pharmacological Laboratory is a large room, situated on the ground floor, and is now furnished with the necessary appliances for the practical teaching of pharmacy. It is hoped that before another session passes away, the apparatus necessary for the demonstration of the more important actions of many drugs will be in possession of the Faculty.

CHEMICAL LABORATORY.

The Chemical Laboratory is large, lofty, and well lighted, and can accommodate comfortably 76 men at one time. Each student, when entering on this course, has a numbered table in the laboratory assigned to him for his use during the session. Each table has its own gas and water fixtures, and is provided with shelves for its corresponding set of reagent-bottles, as well as a drawer and locker, containing a modern set of chemical apparatus especially adapted for the work. This apparatus is provided by the Professor of Chemistry, and supplied to each student without extra charge. The student is only required to pay for apparatus broken or destroyed.

The laboratory is furnished with large draught closet for ventilation, sulphuretted hydrogen apparatus, gas and combustion furnaces, etc., giving to the student unsurpassed advantages for acquiring a sound and practical knowledge of medical chemistry.

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PATHOLOGICAL LABORATORY.

In the Pathological Laboratory accommodation will be provided for students or practitioners who desire to carry on private pathological research.

The recent additions made to the laboratory include a suite of rooms, exclusively devoted to the study and culture of Bacteria, furnished with a complete outfit of the best modern apparatus for this purpose, including sterilizer, thermostat, &c., &c.

The demonstrations in Morbid Anatomy will be given in a small laboratory, specially arranged for the work.

The classes in Pathological Histology will be held in the Histological Laboratory.

The class tickets for the various courses are accepted as qualifying candidates for examination before the various Colleges and Licensing bodies of Great Britain and Ireland, and the College of Physicians and Surgeons of Ontario. The degree in Medicine of this University carries with it at the Licensing Boards of Great Britain the same exemptions in certain subjects as are granted to all colonial degrees.

To meet the circumstances of the General Practitioners in British North America, where there is no division of the profession into Physicians and Surgeons exclusively, the degree awarded upon graduation is that of "Doctor of Medicine and Master of Surgery," in accordance with the general nature and character of the curriculum, as fully specified hereafter. The degree is received by the College of Physicians and Surgeons of the Province of Quebec.

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§ 1.—MATRICULATION.

It is very important that intending Students should bear in mind the following :—

(1) If residents of Ontario, and desirous of obtaining the license of that Province, they must conform to the regulations regarding the Preliminary Examination, and register before beginning their medical studies.

(2) If residents of the Province of Quebec, and desirous of obtaining the license of that Province, they must pass the Matriculation Examination of the Quebec Medical Board before beginning their medical studies.

(3) Residents of the Maritime Provinces, and of Manitoba, may present themselves before the Local Medical Boards for the Preliminary Examination. Where the Examination and Standard are equivalent to those of this University, a certificate (bearing the standing of the candidate in the various subjects) will be accepted, and the student may register without further examination or fee.

Graduates in Arts are exempt from the Matriculation.

(A).—UNIVERSITY MATRICULATION EXAMINATION.

Students have the option of passing either the Arts or Medical Matriculation of this University. The latter is the same as that recommended by the Medical Council of Great Britain. Examinations in conformity therewith will be held the last Friday and Saturday in March, and the third Friday and Saturday in September of each year. Applications may be made to the Registrar of the Faculty till the evening of the previous day. The requirements of the standard for Marticulation are :—(1) English Language, including Grammar and Composition.* (2) English History. (3) Modern Geography. (4) Latin, including Translation from the original and Grammar. (5) Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fracbtions ; (*b*) Algebra, including simple Equations ; (*c*) Geometry, including the first two books of Euclid, or the subjects thereof. (6) Elementary Mechanics of Solids and Fluids, comprising the elements of Statics, Dynamics and Hydrostatics. (7) One of the following optional subjects :—(*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry.

TEXT-BOOKS.—Latin,—Cicero, Orations 1 and 2 against Cataline ; of Virgil, Æneid, Bk. I.

GREEK.—Xenophon, Anabasis, Bk. I., or equivalent. FRENCH.—Charles XII., Two Books. NATURAL PHILOSOPHY.—Ganot's Physics. BOTANY. ELEMENTARY CHEMISTRY.

* The ability of the candidate will be fully tested in the following :—" (1) To write sentences in English on a given theme, attention being given to spelling and punctuation as well as to composition ; (2) to write correctly from dictation ; (3) to explain the grammatical construction of sentences ; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature ; and (5) to give the derivation and definition of English words in common use."

(B).—MATRICULATION EXAMINATION OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF QUEBEC.

Compulsory Subjects.

LATIN.—Cæsar's Commentaries, Book V.—Virgil's Æneid, Book V.—The Odes of Horace, Book I.

ENGLISH.—Spraque's "Six Selections from Washington Irving's Sketch Book." —A play of Shakespeare, viz., "The Tempest," for 1884; Richard III., for 1885; and "The Midsummer Night's Dream," for 1886.

FRENCH.—Fénélon's "Adventures de Télémaque."—A French play, viz., Corneille's "Le Cid," 1884: Moliere's "Le Misanthrope," for 1886, and Racine's "Esther" for 1887.

BELLES LETTRES.—Principles of the subject. History of the Literature of the age of Pericles in Greece, of Augustus in Rome, of Elizabeth in England, and Louis XIV. in France.

HISTORY.—Outlines of the History of Greece and Rome, with particular knowledge of England, France and Canada.

GEOGRAPHY.—A general view, with particular knowledge of England, France and North America.

ARITHMETIC.—Must include Vulgar and Decimal Fractions, Simple and Compound Proportion, Interest and Percentages, and Square Root.

ALGEBRA.—Must include Fractions and Simultaneous Equations of the First Degree.

GEOMETRY.—Euclid, Books I., II., III., or the portion of Plane Geometry covered by those Books. Also the measurement of the lines, surfaces and volumes, of regular geometrical figures.

Optional Subjects.

GREEK.—Xenophon's Anabasis, Book I.—Homer's Illiad, Book I.

PHYSICS.—Outlines of the subject, as in Ganot's Physics, translated by Atkinson.

PHILOSOPHY.—Elements of Logic and of Moral Philosophy, as in Jevon's Logic and Calderwood's Hand-book of Moral Philosophy.

The Examinations will be held upon the 17th of September, 1887, at Quebec, and on the 5th of May, 1888, at Montreal. Applications to be made to Dr. F. W. Campbell, Montreal, or Dr. Belleau, Quebec, either of whom will furnish schedule giving text books and percentage of marks to be obtained.

Examination Fee, ten dollars. Should the candidate be unsuccessful, one half of the fee will be returned.

Of the four years' study *after* having passed the Matriculation Examination, three six months' sessions, at least, must be attended at a University, College, or Incorporated School of Medicine, recognized by the "Provincial Medical Board." The first session must be attended during the year immediately succeeding the Matriculation Examination, and the final session must be in the 4th year.

(c.)—Matriculation Examination of the College of Physicians and Surgeons of Ontario.

Every one desirous of being registered as a Matriculated Medical Student in the Register of this College, except as hereinafter provided, must present to the Registrar the official certificate of having passed the 3rd class non-professional examination with Latin; whereupon he shall be entitled to be so registered upon the payment of twenty dollars and giving proof of his identity.

Graduates in Arts, or Students having matriculated in Arts in any University in Her Majesty's Dominions, are not required to pass the Examination, but may register their names with the Registrar of the College, upon giving satisfactory evidence of their qualifications and upon paying the fee of twenty dollars.

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§ II—ENREGISTRATION AND PAYMENT OF FEES.

The following are the University Regulations :—

All Students desirous of attending the Medical Lectures shall, at the commencement of each Session, enrol their names and residences in the Register of the Medical Faculty, and procure from the Registrar a ticket of Enregistration, for which each Student shall pay a fee of $5 ; excepting in the Clinical Classes, in which Enregistration for Students of other Schools shall not be compulsory.

The said Register shall be closed on the last day of October in each year. The fees are payable to, and all class tickets will be issued by, the Registrar, and must be paid in advance (except under special circumstances) at the time of enregistration.

Enregistration in the Summer Session is compulsory upon all Students, whether attending one or more of the classes.

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§ III. COURSES OF LECTURES.

ANATOMY.

PROFESSOR, FRANCIS J. SHEPHERD.

Anatomy is taught in the most practical manner possible, and its relation to Medicine and Surgery fully considered. The lectures are illustrated by the fresh subject, moist and dry preparations, sections, models and plates, and drawings on the blackboard.

PRACTICAL ANATOMY.

Demonstrator, RICHARD L. MACDONNELL.

Assistant Demonstrators, { WILLIAM R. SUTHERLAND. R. J. B. HOWARD.

Special attention is devoted to this important branch, the teaching being similar to that of the best European schools. The Dissecting Room is open from 8 a.m. to 10 p.m.; the Demonstrators' hours are from 10 to 12 a.m., and 8 to 10 p.m. Special Demonstrations on the Brain, Thorax, Abdomen, Bones, &c., are frequently given. Every Student must be examined *at least* three times on each part dissected, and if the examinations are satisfactory a certificate is given. Prizes are awarded at the end of the Session for the best examination on the fresh subject. Abundance of material provided.

CHEMISTRY.

PROFESSOR, GILBERT P. GIRDWOOD.

Inorganic Chemistry is fully treated; a large portion of the course is devoted to Organic Chemistry and its relations to Physiology. The branches of Physics bearing upon or connected with Chemistry also engage the attention of the Class. For experimental illustration abundant apparatus is possessed by the College.

The Chemical Laboratory will be open to members of the class to repeat experiments performed during the course, under the superintendence of the Professor or his Assistant.

PRACTICAL CHEMISTRY.

PROFESSOR, GILBERT P. GIRDWOOD.

Assistant, R. F. RUTTAN.

The course in practical chemistry includes two hours' laboratory work three times a week, for three months. The Students are instructed individually in chemical manipulations, blow-pipe analysis, and qualitative determination of the salts, acids, &c., he will require to use in practice. He is required before finish-

ing his course to be familiar with the principles of practical Forensic and Sanitary Chemistry. Special attention is directed to instructing the Student in making accurate notes of his experiments and his conclusions. These notes are examined daily and criticised.

PHYSIOLOGY.

PROFESSOR, T. WESLEY MILLS.

The purpose of this Course is to make Students thoroughly acquainted, as far as time permits, with modern Physiology: its methods, its deductions, and the basis on which the latter rest. Accordingly a full course of lectures is given, in which both the Experimental and Chemical departments of the subject receive attention.

In addition to the use of diagrams, plates, models, &c., every department of the subject is experimentally illustrated. The experiments are free from elaborate *technique*, and many of them are of a kind susceptible of ready imitation by the Student.

Laboratory work for Senior Students:—

(1) During the first part of the Session there will be an optional course on Physiological Chemistry, in which the Student will, under direction, investigate food stuffs, digestive action, blood, and the more important secretions and excretions, including urine. All the apparatus and material for this course will be provided.

(2) The remainder of the Session will be devoted to the performance of such experiments as are unsuitable for demonstration to a large class in the lecture room, and such as require the use of elaborate methods, apparatus, &c.* There will be no extra fee for this part of the course.

As far as possible, senior Students who do not share in the above courses will be given an opportunity to take some practical part in the physiological work.

HISTOLOGY.

PROFESSOR, GEO. WILKINS.

This will consist of a course of ten lectures, and twenty-five weekly demonstrations with the Microscope. As the demonstrations will be chiefly relied upon for teaching the Microscopic Anatomy of the various structures, the specimens under observation will then be minutely described. Plates and diagrams specially prepared for these lectures will be freely made use of.

Practical Histology.—This is an optional course given by Prof. Wilkins for the purpose, more especially, of teaching Microscopy. It will consist of twenty-

* In selecting those who shall join in this course, preference will be given to those who have been most devoted and successful in the pursuit of Physiology during their first year.

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five lessons of two hours each. Each Student will be provided with a Microscope and shewn how to use it, and also how to cut, stain and mount specimens for microscopical investigation.

For the purpose of enabling students to observe the different effects of staining, &c., on diseased and healthy structures, a few diseased specimens will be given them to prepare, at the latter part of the course. Students are at liberty to keep all the specimens they prepare. One of the great advantages of this course is that Students will be able to collect a cabinet of 100 or more specimens for reference at any time; these, besides being of great help to them during their College course, they will find especially useful when in active practice for the purpose of comparison with diseased growths. Re-agents, and everything except cover-glasses and cabinet cases, provided. Fee, $12.

THE MICROSCOPE IN MEDICINE.

DRS. WILKINS AND W. G. JOHNSTON.

This is an optional class for third and fourth year Students, and has been divided into two courses. (1) Pathological Histology, 20 lessons (two hours each, given during the winter, in which special attention will be paid to the microscopical study of pathological anatomy, and methods of preparing specimens. Each student will prepare and mount for himself a cabinet of 100 specimens, illustrating all the principal lesions of disease. (2) Clinical Microscopy, 20 lessons in the summer session, affording a systematic training in the use of the microscope in the diagnosis of disease, the examination of urine, sputum, blood, pus, tumors and parasites of all kinds. Fee for either course alone $12, for both courses $18.

PHARMACOLOGY AND THERAPEUTICS.

PROFESSOR, JAMES STEWART.

The course on this subject deals for the most part with the pharmacology and therapuetics of the different medicinal agents. A good deal of attention will be given to the "untoward effects" of drugs, and when possible these will be illustrated by the exhibition of living specimens.

The leading officinal agents of the British Pharmacopœia will be fully considered, as will also those drugs of recent introduction into practice which have been found useful, but have not, as yet, found their way into the Pharmacopœia. The followimg groups of medicinal agents will, on account of their great importance, receive special attention:—1, Cardiac Tonics; 2, Cardiac Depressants; 3, Motor Stimulants; 4, Motor Depressants; 5, Anæsthetics; 6, Analgesics; 7, Mydriatics; 8, Alteratives; 9, Hæmatinics; 10, Astringents; 11, Purgatives; 12, Digestants; 13, Nutritives; 14, Antiseptics; 15, Antipyretics; 16, Diuretics.

Electro-therapeutics will also be dealt with.

MEDICINE.

PROFESSOR, R. PALMER HOWARD.

While the lectures on this subject are mainly devoted to Special Pathology and Therapeutics, no opportunity is lost of illustrating and explaining the *general* laws of disease. With the exception of certain affections seldom or never observed in this country, all the important internal diseases of the body, except those peculiar to Women and children, are discussed, and their Pathological Anatomy illustrated by the large collection of morbid preparations in the University Museum, and by fresh specimens contributed by the Demonstrator of Morbid Anatomy.

The College possesses an extensive series of Anatomical plates, illustrative of the Histological and Anatomical appearances of disease, and the wards of the General Hospital afford the lecturer ample opportunities to refer to living examples of very many of the maladies he describes, and to give the results of treatment.

CLINICAL MEDICINE.

PROFESSOR, GEORGE ROSS.

Attendance is given the Medical Wards of the Montreal General Hospital on three days of every week, with the 3rd year students, and three days with those of the 4th year. Accurate reports of all cases are kept by duly appointed clinical clerks, and are systematically read before the class. Instruction is given at the bedside, and special inducements are offered to every pupil to take part in the physical examination of patients. The mode of conducting investigation, the use of the microscope, the value of the thermometer and ophthalmoscope, &c., in medical diagnosis, are all explained and illustrated. Senior Students are called upon in rotation to examine new cases before the class, and to be examined thereon as to their general knowledge. In addition, one weekly Clinical Lecture is delivered, bearing upon some case or cases of importance which may happen so be under observation at the time. Special attention is directed to Medical Anatomy, and candidates for the degree will be examined thereon.

SURGERY.

PROFESSOR, GEO. E. FENWICK.

The first part of this course consists of Surgical Pathology, illustrated by a large collection of preparations from the College Museum, also specimens as they are obtained from cases under observation at the Hospital, and contributed to that collection by the Hospital pathologist, and from private sources. The second part of the course is devoted to the practice of Surgery, in which attention is drawn to cases which have been observed by the class during the previous summer session. The various surgical appliances are exhibited, and their uses and application ex-

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plained. Surgical Anatomy and Operative Surgery form a special department of this course, and Quain's and Maclise's plates are used in illustration.

CLINICAL SURGERY.

PROFESSOR, THOMAS G. RODDICK.

This course is eminently practical, consisting of bedside instruction and lectures delivered weekly, illustrative of surgical cases actually present in the wards of the General Hospital. The class is separated into junior and senior divisions, which are taken charge of by the Professor on alternate days, when the reports of the Clinical clerks are read and criticised, and fresh cases are examined by the senior students. The surgical dressings are, as much as possible, reserved for these occasions, so as to give all present an opportunity of participating in the application of splints to fractures, dressing of wounds, minor operations, &c. Major operations are performed in the theatre attached to the Hospital, which is so constructed that the most distant can obtain a fair view of the operations. All the recently invented appliances for the treatment of surgical disease have been introduced into the Hospital.

MIDWIFERY.

PROFESSOR, J. C. CAMERON.

This course will embrace: 1. Lectures on the principles and practice of the obstetric art, illustrated by diagrams, fresh and preserved specimens, the artificial pelvis, &c. 2. Bedside instruction in the University Maternity, including the management and after-treatment of cases. 3. A complete course on obstetric operations with the phantom and preserved fœtuses, in which each final student will perform the various manipulations and operations. The Diseases of Infancy.

GYNÆCOLOGY.

PROFESSOR, WM. GARDNER.

The course on this subject will comprise two lectures a week throughout the session. The anatomy and physiology of the parts concerned will be first discussed. Then the various methods of examination will be fully described, the necessary instruments exhibited, and their uses explained. After this, the diseases peculiar to the sex will be considered as fully as time will permit, in the following order:—Disorders of Menstruation; Leucorrhœa, its causes and treatment; Pelvic Cellulitis and Peritonitis; Lacerations of the Cervix Uteri and Perineum; Urinary and Fæcal Fistulæ; Inflammations of the Uterus; Displacements of the Uterus; Tumors of the Uterus: Diseases of the Ovaries.

The lectures will be illustrated as fully as possible by drawings and morbid specimens. The Gynæcological Clinic of the General Hospital furnishes the Professor with ample material to illustrate the subjects considered in the didactic lectures.

MEDICAL JURISPRUDENCE.

PROFESSOR, GEO. WILKINS.

This course includes Insanity, the subject being treated of in its Medical as well as Medico-legal aspects. Special attention is devoted to the subject of blood stains, the Clinical, Microscopic and Spectroscopic tests for which are fully described and shown to the class. The various spectra of blood in its different conditions are shewn by Zeiss' Microspectroscope, so well adapted for shewing the reactions with exceedingly minute quantities of suspected material. Recent researches in the diagnosis of human from animal blood are alluded to. In addition to the other subjects usually included in a course of this kind, Toxicology is taken up. The modes of action of poisons, general evidence of poisoning, and classification of poisons are first treated of, after which the more common poisons are described, with reference to symptoms, post-mortem appearances, and chemical tests. The post-mortem appearances are illustrated by plates, and the tests are shown to the class.

OPHTHALMOLOGY AND OTOLOGY.

PROFESSOR, FRANK BULLER.

Will include a course of lectures on diseases of the Eye and the Ear, both Didactic and Clinical. In the former the general principles of diagnosis and treatment will be dealt with; in the latter, cases illustrative of the typical forms of ordinary diseases of these organs will be exhibited and explained to the class, and afterwards placed under the special care of gentlemen who may show themselves competent to take charge of them. A course of operations on the cadaver will be open to such students as may wish to avail themselves of the same.

HYGIENE.

PROFESSOR, R. L. MACDONNELL.

This course of Lectures will be delivered during the summer session only. It comprises lectures on Drinking water and Public Water Supplies; conditions of Soil and Water as affecting health, including Drainage and the various methods for the removal of Excreta; the Atmosphere, including Heating and Ventilation; Individual Hygiene, comprising the subjects of Food and Drink; Physical Exercise and Bathing; discussion of the respective merits of the various forms of each, precautions, contra-indications, &c. Village Sanitary Associations; Mutual Protective Sanitary Associations for cities.

BOTANY.

PROFESSOR, D. P. PENHALLOW.

The course in Botany includes General Morphology, Histology, Physiology and Classification. It is designed to give special prominence to Physiology, which will be made comparative whenever practicable. The course is illustrated by the microscope and gas microscope, and by the collection, models and apparatus in the Peter Redpath Museum.

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ZOOLOGY.

PROFESSOR, SIR WILLIAM DAWSON.

This course includes a systematic study of the classification of animals, illustrated by Canadian examples, and by the collections in the Peter Redpath Museum. It forms a suitable preparation for collecting in any department of Canadian Zoology and Palæontology, and an introduction to Comparative Physiology. It may be taken instead of Botany, or along with it, without any additional fee.

Students in Botany or Zoology will receive tickets to the Peter Redpath Museum, and to the Museum of the Natural History Society of Montreal.

PATHOLOGY.

W. G. JOHNSTON, DEMONSTRATOR.

This Course comprises :—

1. Twenty-five lectures on General Pathology to students of the 3rd year.

2. Pathological Demonstrations weekly—Saturday at 10 a.m. Specimens of all kinds collected during the week, and their gross and microscopic appearances are demonstrated to the final classes. In addition, special demonstrations in Pathological Histology are given throughout the session.

3. Instruction in Post-Mortems. The Autopsy Room of the General Hospital is in charge of the Demonstrator. The post-mortems are performed by the students in rotation under his direction, and systematic demonstrations of post-mortem methods, including those to be followed in Medico-legal cases, will also be given.

Extracts from the University Regulations with respect to the Courses of Lectures.

1st. Each Professor shall deliver at least five Lectures during the week, except in Medical Jurisprudence and Botany, if extended through six months, in which case three Lectures a week will suffice.

2nd. Every Lecture shall be of one hour's duration.

3rd. Every Professor shall occasionally examine his class upon the subjects treated of in his preceding Lectures, and every such examination shall be considered as a Lecture.

4th. A roll of the names of the Students attending each class shall be called from time to time.

§ IV. QUALIFICATIONS FOR THE DEGREE.

The following are Extracts from the Regulations respecting the qualifications of Candidates for the Degree in Medicine :—

1st. No one entering after October 1st, 1884, will be admitted to the Degree of Doctor of Medicine and Master of Surgery, who shall not have attended Lectures for a period of at least four six months' sessions and one three months' summer session* in this University, or some other University, College or School of Medicine, approved of by this University.

2nd. Candidates for Final Examination shall furnish Testimonials of attendance on the following branches of Medical Education, viz. :—

Anatomy.	Of which Two Courses will be required of Six Months' duration.
Practical Anatomy.	
Physiology.	
Chemistry.	
Materia Medica and Therapeutics.	
Principles and Practice of Surgery.	
Midwifery and Diseases of Women and Children.	
Theory and Practice of Medicine.	
Clinical Medicine.	
Clinical Surgery.	
Medical Jurisprudence.	Of which One Course of Six Months, or Two Courses of Three Months will be required.
Practical Chemistry.	Of which One Course will be required of Three Months' duration.
Botany or Zoology.	
Hygiene.	
Histology.	Ten Lectures and Twenty-five Demonstrations.
General Pathology.	Twenty-five Lectures.

Provided, however, that Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted.

3rd. The Candidates must give proof by ticket of having attended during eighteen months the practice of the Montreal General Hospital, or that of some other Hospital approved of by this University, and have compounded medicines for six months.

4th. He must also give proof by ticket of having attended for at least six months the practice of the Montreal, or other Lying-in-Hospital, approved of by this University, and of having attended at least six cases of labor.

5th. No one will be permitted to become a Candidate for examination who

* To be taken after 3rd Winter Session.

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shall not have attended at least one Session of this University, and one full course of all the branches included in its curriculum.

6th. Courses of less length than the above will only be received for the time over which they have extended.

7th. Students, except by special permission of the Faculty, must pursue the subjects of Anatomy, Chemistry, Histology and Botany in their first session, and are advised to take Physiology in addition.

8th. Candidates who fail to pass in a subject of which two courses are required must attend a third course, and furnish certificates of attendance thereon. A course in Practical Anatomy will be accepted as equivalent to a third course of lectures in General and Descriptive Anatomy.

9th. Supplemental examinations will not be granted, except by special permission of the Medical Faculty, and on written application, stating reasons.

10th. The requirements for the summer session, when as at present taken after the third winter session, shall be :—

(*a.*) Daily Hospital attendance ;

(*b.*) Maternity attendance ; and

(*c.*) Any two weekly clinics in addition to the clinics on General Medicine and Surgery.

11th. Every Candidate for the Degree must, on or before the fifteenth of February, present to the Registrar of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and must at the same time deliver to the Registrar of the Faculty the following Certificate :—

MONTREAL, ——— 18—

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, or (if the case be otherwise) that I shall have attained the age of twenty-one years before the next graduation day, and that I am not (or shall not be at any time) under articles as a pupil or apprentice to any Physician, Surgeon, or Apothecary.

(Signed), A. B.

12th. The trials to be undergone by the Candidate shall be such as are referred to under Section V.

13th. The following Oath or affirmation will be exacted from the Candidate before receiving his degree ;—

SPONSIO ACADEMICA.

In Facultate Medicinæ Universitatis.

Ego, A—— B——, Doctoratus in Arte Medica, titulo jam donandus, sancto coram Deo cordium scrutatore, spondeo ;—me in omnibus grati animi officiis erga hanc Universitatem, ad extremum vitæ halitum, perseveraturum ; tum porro artem medicam caute, caste, et probe exercitaturum ; et quoad in me est, omnia ad ægrotorum corporum salutem conducentia, cum fide procuraturum ; quæ denique, inter medendum, visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

14th. The fee for the Degree of Doctor of Medicine and Master of Surgery shall be thirty dollars, to be paid by the successful candidate immediately after examination.

§ V.—EXAMINATIONS.

Weekly examinations are held to test the progress of the Student; and in addition two or three written examinations are given throughout the Session.

The examinations at the close of each Session are arranged as follows:—

First Year.

Pass Examination in Botany and Histology.

Sessional Examination in Anatomy, Chemistry, and Physiology.

A maximum of one hundred marks will be allowed for the Sessional Examination in each subject, which marks shall be reckoned in the ranking of the candidate after the examination of the following year.

Second Year.

Pass Examination in Anatomy, Chemistry, Practical Chemistry and Physiology.

Sessional Examination in Pharmacology and Therapeutics.

One hundred marks will be allowed for the Sessional Examination, which marks shall be reckoned in the ranking of the candidate after the examination of the following year.

Third Year.

Pass Examination in Pharmacology and Therapeutics, Medical Jurisprudence, Hygiene* and Pathology.

Fourth Year.

Pass Examination in Medicine, Surgery, Obstetrics, Clinical Medicine, Clinical Surgery.

By means of the above arrangement a certain definite amount of work must be accomplished in each year, and an equitable division is made between the Primary and Final branches.

With regard to the Primary Examination at the end of the second year, it remains optional with the Student whether he passes in all the branches or leaves two for the third year. In any case, Chemistry and one other must be taken at the close of the second year.

* The examinations in Hygiene are held at the close of the summer session.

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§ VI. MEDALS AND PRIZES.

1st. The Holmes Gold Medal, awarded to the Student of the graduating class who receives the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final branches.

The Student who gains the Holmes Medal has the option of exchanging it for a Bronze Medal, and the money equivalant of the Gold Medal.

2nd. A Prize in Books awarded for the best examination, written and oral, in the Final branches. The gold medallist is not permitted to compete for this prize.

3rd. A Prize in Books awarded for the best examination, written and oral, in the Primary branches.

4th. The Sutherland Gold Medal, awarded for the best examination in Theoretical and Practical Chemistry, together with creditable examination in the Primary branches.

5th. A Prize in Books for the best examination in Practical Anatomy.

6th. Prizes in Botany.

A Prize in Books for the best examination.

* A prize of $20 for the best named collection of Canadian plants.

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§ VII. FEES.

Distributed according to years, the Class Fees are as follows :—

FIRST YEAR.

Anatomy	$12
Physiology	12
Histology	6
Chemistry	12
Practical Anatomy	12
Botany	5
Dissecting Material	5
Enregistration	5
Total	$69

* This Prize is open to both Medical and Arts Students.

SECOND YEAR.

Anatomy	$12
Practical Anatomy	12
Physiology	12
Chemistry	12
Practical Chemistry	12
Chemical Reagents	3
Materia Medica	12
Hygiene	6
Practical Physiology	6
Dissecting Material	5
Enregistration	5
Total	$97

THIRD YEAR.

Medicine	12
Materia Medica	12
Clinical Medicine	12
Surgery	12
Clinical Surgery	12
Midwifery and Gynæcology	12
Medical Jurisprudence	10
Pathology	10
Enregistration	5
Total	$97

FOURTH YEAR.

Medicine	$12
Surgery	12
Clinical Medicine	12
Clinical Surgery	12
Midwifery and Gynæcology	12
Enregistration	5
Total	$65
Summer Session	25

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HOSPITAL FEES.

Montreal General Hospital, Perpetual Ticket	$20
University Dispensary	Free
Montreal Maternity	8
Total	$28
Graduation Fee	30
Matriculation Fee, payable only if the Student takes the University Matriculation	5
Total Collegiate and Hospital expenses, spread over four years, about	$400

It is to be understood that a Student, wishing to take any other class than that of his year can do so on payment of the class fee.

Fees are payable in advance, to the Registrar, at the time of enregistration.

Cheques or P.O. Orders for Fees may be transmitted direct to the Registrar, who will furnish official receipts therefor.

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§ VIII. TEXT-BOOKS.

ANATOMY.—Gray, Wilson, Quain (Eng. Ed.).

PRACTICAL ANATOMY.—Heath's Dissector, Ellis' Dissector, Holden's Dissector, and Landmark's.

PHYSICS.—Balfour Stewart.

INORGANIC CHEMISTRY.—Madan Wilson's, Millar.

ORGANIC CHEMISTRY.—Armstrong.

PRACTICAL CHEMISTRY.—Odling, Galloway, Fresenius.

PHARMACOLOGY and THERAPEUTICS.—Wood, Lauder Brunton, Whitla, and Bruce.

PHYSIOLOGY.—Huxley's *Elementary Lessons*, Yeo, Foster, Prof. Mills' Outlines of Lectures.

PATHOLOGY.—Orth's Diagnosis in Pathology.

HISTOLOGY.—Klein's Elements, Schafer's Essentials of Histology.

SURGERY.—Holmes' Surgery (Eng. Ed.), Erichsen, Druitt, Bryant.

PRACTICE OF MEDICINE.—Flint, Roberts, Bristowe, DaCosta, Fagge.

FOR REFERENCE.—Pepper's System of Medicine.

CLINICAL MEDICINE.—Graham Brown's Manual of Diagnosis, Finlayson's Clinical Manual, Flint on Auscultation and Percussion, and Loomis on Physical Diagnosis.

MEDICAL JURISPRUDENCE.—Husband, Guy and Ferrier, Reese.

MIDWIFERY.—Lusk, Galabim.

GYNÆCOLOGY.—Edis, Goodell's Lessons, Hart and Barbour's Manual, Thornburn.

HYGIENE.—Parks, Wilson (Eng. Ed.).

BOTANY.—Gray's Text Book of Histology and Physiology.

ZOOLOGY.—Dawson's Handbook of Canadian Zoology.

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§ IX. MUSEUM.

CURATOR, W. R. SUTHERLAND, M.D.

Most of the usual Pathological Specimens are collected here, obtained from Hospital and private practice. They are largely used in illustrating the lectures on Medicine and Surgery. There are also wax and papier-maché models.

During the past few years numerous and extremely important additions have been made to the Medical Museum.

It is particularly rich in specimens of Aneurisms. In addition to containing a large number of the more common varieties of these formations, there are specimens of such rare conditions as Aneurism of the Hepatic and Superior Mesenteric Arteries, Traumatic Aneurism of the Vertebral, together with several of the cerebral and pulmonary arteries. The most important collection probably in existence of hearts affected with "Malignant Endocarditis" is also found. The Faculty are indebted to Prof. Osler, late of this University, for this collection.

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Specimens representing morbid alterations of the liver, and gall bladder, including Cirrhosis (a beautiful specimen of the Hypertrophic form, weighing 9½ lbs.), Hydatids, Cancer, Abscess, Suppurative Hepatitis following Aneurism of the Hepatic Artery. This section also contains a large number of Biliary Calculi.

Intestines and Peritoneum.—Specimens illustrating the Morbid Anatomy of Typhoid Fever, Tropical Dysentery, Ulceration, and Malignant Disease.

Urinary Organs.—Besides the various forms of Bright's Disease, there are a number of specimens of Surgical and Cystic Kidneys, together with two specimens of Meyo-Sarcoma. A cabinet of Urinary Calculi, collected by Dr. Fenwick, is the property of the Museum.

Bones and Joints.—During the past two years the Faculty have made very extensive additions to the specimens illustrating diseases of the bones and joints, all of which are beautifully mounted.

Nervous System.—In this section are included a most beautiful collection of Brains, prepared by Dr. Osler after the method of Giacomini. Besides those illustrating pathological defect, there are normal specimens of the brains of horse, cow, dog, cat, pigeon, goose, lion, bear, seal, &c.

The Museum also contains a collection of human abnormalities, made by Dr. Shepherd during the time be was Demonstrator of Anatomy.

A collection of specimens of eye diseases, made by Dr. Buller, has been presented to the Museum.

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§. X.—LIBRARY.

The Library of the Medical Faculty now comprises upwards of ten thousand volumes, the largest special library connected with any medical school on this continent.

The standard text-books and works of reference, together with complete files of the leading periodicals, are on the shelves. Students may obtain books on making a deposit of $5, which is refunded on returning the volumes.

§ XI.—M'GILL MEDICAL SOCIETY.

This Society, composed of enregistered Students of the Faculty, meets once a week during the Summer Session, and fortnightly during the Winter, for the reading of papers and the discussion of medical subjects. It is presided over by a physician chosen by the members.

A reading room has been established in connection with the Society, in which the leading English and American Medical Journals are on file.

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§ XII.—COST OF LIVING, &c.

This will, of course, vary with the tastes and habits of the Student, but the necessary expenses need not exceed those in smaller towns. Good board may be obtained from $15 to $20 per month. A list of boarding-houses is prepared annually by the Secretary of the University, and may be procured from the Janitor at the Medical College.

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§ XIII.—HOSPITALS.

Montreal General Hospital.

The Montreal General Hospital is the most extensive clinical field in the Dominion. A much larger number of in-door and out-door patients receive treatment there than in any other Canadian Hospital. Last year's report shows that 2,347 Medical and Surgical cases were treated in the wards, and the great proportion of these were acute cases, as may be gathered from the fact that the average duration of residence was only 23.6 days.

The large number of out-door patients that are treated in the Hospital—averaging from sixty to seventy daily—supply illustrations of most of the diseases of infants and children, of very many of the eye and skin, and of those chronic and ill-defined ailments which, as they do not require admission to the wards of a hospital, would not otherwise come under the observation of the Student.

The large number of patients affected with diseases of the eye and ear, now attending the out-door department, will afford Students ample opportunity to become familiar with all the ordinary affections

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of those organs, and to make themselves proficient in the use of the ophthalmoscope, and it is hoped that every student will thus seek to gain a practical knowledge of this important branch of Medicine and Surgery. Operations are performed on the eye by Dr. Buller, after the out-door patients have been seen, and Students are invited to attend the same, and, as far as practicable, to keep such cases under observation so long as they remain in the Hospital.

There are now special departments in the Hospital for Gynæcology and Laryngology, presided over by Specialists in these branches. Students are thus enabled to acquire special technical knowledge under skilled direction. The plan of teaching practical gynæcology for the past five years with marked success has been the limitation of the number of Students to two or three, who, in rotation, assist at the examinations, and receive instruction in the diagnosis and treatment of uterine diseases, and the use of gynæcological instruments.

Clinical Clerks, in both medical and surgical wards, are appointed every three months, and each one during his term of service conducts, under the immediate directions of the Clinical Professors, the reporting of all cases in the ward allotted him. The holding of one of these offices is found to be of the greatest possible advantage to Students, as affording a true *practical* training for his future professional life. They will be awarded on application at the end of each Session to final Students of that year, in order of their standing in the primary examination.

Dressers are also appointed to the Surgical wards, and to the Out-door Department. For these appointments application is to be made to the Professor of Clinical Surgery, and to the Out-door attending Physicians and Surgeons.

The Operating Room (used also for a lecture room) is so constructed as to enable the Students to obtain a good view of the operations.

Montreal Dispensary.

ST. ANTOINE STREET.

Over 12,000 patients yearly are treated at this Institution. The cases are of great variety, comprising a large number of pulmonary affections and children's diseases. Minor operations are of daily occurrence, and excellent practice is afforded in the application of splints and bandages. The attending Physicians furnish Students with all possible facilities. The hours of attendance are from 12 to 2 daily.

The Montreal Maternity.

The Faculty have great pleasure in announcing that the Corporation of the University Maternity have in contemplation the erection of a large and comfortable maternity building. It will be constructed with all those modern improvements, which science and experience have demonstrated to be of value in this class of buildings. Students will in future, therefore, have much more abundant opportunities for becoming practically acquainted with Midwifery practice. The maternity will, as in the past, be under the direction of the Professor of Midwifery, and Students who have already attended one course of his lectures will be furnished with cases in rotation. Particular attention will be given to individual clinical instruction. Students are advised to attend this Institution as much as possible during the summer, when, since there are as many patients and not so many pupils as in winter, a larger proportion of cases falls to the share of each.

University Dispensary.

This Dispensary is a pure Polyclinic, being used only for the teaching of special departments of Practical Medicine and Surgery. Instituted a number of years ago, it has been found very successful, fulfilling the aims of the University in giving Students special training in certain branches not elsewhere so readily obtainable. At the present time there are three special Clinics connected with this Dispensary.

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Diseases of Children.—The Clinic is on Tuesdays, Thursdays and Saturdays at 1 p. m., when the patients are seen and instruction given on the cases.

Diseases of the Skin.—The Surgeon in charge will attend every Friday at 2 p.m. Arrangements will be made, whereby a limited number of students can be present on each occasion.

Diseases of the Nervous System.—The Physician in charge will attend every Monday and Friday at 11 a.m. Students will have an opportunity in this Clinic of seeing and examining many of those obscure and chronic diseases of the brain and spinal cord, which are now attracting so much attention in the medical world.

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§ XIV. STUDENTS' APPOINTMENTS.

General Hospital—Three Resident Medical Officers.
Clinical Clerk, Gynæcology.
" " Laryngology.
" " Diseases of Children.
" " Dermatology.
" " Diseases of Nervous System.
University Maternity.—One Resident Medical Officer.
Out-door Dressers.
Dressers in Eye and Ear Department.
Surgical Dressers (In-door).
Medical Clinical Clerks.
Post-mortem Clerks.
Student Demonstrators of Anatomy, 4 third-year Students.
Prosectors to Chair of Anatomy, 2.
Assistants in Practical Histology Course, 2.
Assistants in Practical Physiology Course, 4.
Assistants in Practical Chemistry, 2.

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§ XV. RULES FOR STUDENTS.

1. In the case of disorderly conduct, any Student may, at the discretion of the Professor, be required to leave the Class-room. Per-

sistence in any offence against discipline after admonition by the Professor shall be reported to the Dean of the Faculty. The Dean may, at his discretion, reprimand the Student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from classes.

2. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

3. While in the College, Students are expected to conduct themselves in the same orderly manner as in the Class-room.

4. When Students are brought before the Faculty under the above rules, the Faculty may reprimand, impose fines, disqualify from competing for prizes and honors, suspend from Classes, or report to the Corporation for expulsion.

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McGill University.—Faculty of Medicine.

TIME TABLE—FIRST AND SECOND YEARS, 1887–88.

A.M.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy Examination.	Anatomy.	Anatomy.	Anatomy.	Anatomy.	Physiology, 2nd Year.
10	* Practical Chemistry. 2nd Year till 12 o'clock.	Practical Chemistry, II. Botany, 1st Year.	Practical Chemistry. 2nd Year.	Practical Chemistry. Botany, 1st Year.	Practical Chemistry. 2nd Year.	Practical Chemistry. Practical Physiology. Histology Demonstration.
11	Out Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital. Zoology.	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital.	Out-Patients, Montreal Gen'l Hospital. Zoology.	Out-Patients, Montreal Gen'l Hospital.
P.M. 2	Physiology Examination, 2nd Year.	Physiology. 2nd Year.	Physiology. 2nd Year.	Physiology, 1st Year.	Physiology, 1st & 2nd Years.	
3	Chemistry Examination.	Chemistry.	Chemistry.	Chemistry.	Chemistry.	
4	Therapeutics Examination. Physiology. 1st Year.	Therapeutics. Physiology, 1st Year.	Therapeutics. Physiology, 1st Year.	Therapeutics.	Therapeutics. Histology Lecture, 1st Year.	
4 to 6		Practical Histology.		Practical Histology.		
A.M. 10 to 12	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.	Practical Anatomy.

N.B.—The Demonstrator's Hours in the Dissecting Room from 10–12 a.m., and from 8–10 p.m. * Until Christmas only.

McGill University.—Faculty of Medicine.

TIME TABLE—THIRD AND FOURTH YEARS, 1887-88.

A.M.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Midwifery.	Gynæcology.	Midwifery.	Gynæcology.	Midwifery.	
10	Surgery. Examination.	Surgery.	Surgery.	Surgery.	Surgery.	Morbid Anatomy. Demonstrations.
11	Practice of Medicine. Examination.	Practice of Medicine.	Practice of Medicine.	Practice of Medicine.	Practice of Medicine.	
P.M. 1-2.30	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.	Medical Clinic, 4th Year. Surgical Clinic, 3rd Year.	Surgical Clinic, 4th Year. Medical Clinic, 3rd Year.
1		Clinic on Diseases of Children.		Clinic on Diseases of Children.		Clinic on Diseases of Children.
2					Skin Clinic.	
2.30			Neurological Clinic.			
2.30	Ophthalmic Clinic.		Ophthalmic Clinic.		Ophthalmic Clinic.	
4	Therapeutics Examination.	Therapeutics.	Therapeutics.	Therapeutics.	Therapeutics.	
4	Gynæcological Clinic.	General Pathology.	Gynæcological Clinic.	Lecture on Ophthalmology.	Gynæcological Clinic.	

Autopsies are performed at the General Hospital between 12 and 2 p.m.

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Faculty of Law.

THE PRINCIPAL (Ex-officio).

Professors :—LAFLAMME.
KERR.
TRENHOLME.
WURTELE.
RAINVILLE.

Professors :—ARCHIBALD.
LAREAU.
HUTCHINSON.
ROBIDOUX.
DAVIDSON.

Lecturer :—HART.

Dean of Faculty.—Professor W. H. KERR, Q.C., D.C.L.

Registrar of the Faculty.—J. S. ARCHIBALD, Q.C., M.A., D.C.L.

Corporation Examiners for Degrees.—Professors N. W. TRENHOLME, M.A., D.C.L., and EDMOND LAREAU, D.C.L.

Matriculation Examiners of the Faculty —Professors J. S. ARCHIBALD, M.A., D.C.L., and EDMOND LAREAU, D.C.L.

The Classes in Law will commence on Friday, the first of October, 1887, and will extend to April 9th, 1888.

The Examinations will be held in the William Molson Hall, McGill College Building, from 4 to 6 p.m., on the 15th, 17th, 20th and 22nd December, 1887, and on the 25th, 29th and 31st March, 1888.

The complete course of study in this Faculty extends over three years; but it may be shortened to two years, when the Student matriculates in the third year of his indentures.

Students who avail themselves of the privilege of attending two years only will, nevertheless, be required to pass an examination in the subjects comprised in the three years' course.

Matriculated Students who do not take the whole course are classed as Partial Students and are not entitled to proceed to the Degree of B.C.L.

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Occasional Students will be received without matriculation for attendance on any particular series of Lectures.

Students who have completed their course of three years,—or of two years, if they have commenced in the third year of their indentures,—and have passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Faculty, to the Degree of Bachelor of Civil Law.

COURSE OF STUDY.

FIRST YEAR.

Legal History..... Professor LAREAU.

Civil Law :

Persons, Property, Ownership } Professor ROBIDOUX.

Roman Law :

Institutes of Justinian, B. I, Gaius, C. I, Maine, Chapters I. to IV } Professor TRENHOLME.

Civil and Commercial Law :

Commercial Agency and Partnership..... Professor DAVIDSON.
Jurisdiction of Civil Courts, General Rules of Pleading, Code of Procedure from Art. 1st to 135..... Professor HUTCHINSON.

Criminal Law..... Professor ARCHIBALD.

Notarial Course :

Theory and Practice of Notarial Deeds and Proceedings..... } Lecturer HART.

SECOND AND THIRD YEARS,

Legal Biography :

Civil Law :

Privileges and Hypothecs, Prescriptions, Imprisonment in Civil Cases..... } Professor LAREAU.

Civil Law :

Successions, Gifts and Wills, Substitutions..... } Professor ROBIDOUX.

International Law, (Public and Private) ..... } Professor KERR.
Insurance ..... }

Roman Law:

Institutes of Justinian, B. II. and B. III. to Title 14 }
Gaius, Chaps. II. and III ..... } Professor TRENHOLME
Maine, Chapters V. to VIII ..... }

Commercial Law:

Bills and Notes ..... Professor DAVIDSON.

Civil Procedure:

From Article 763 to end of Code ..... Professor HUTCHINSON.

Criminal Procedure and Constitutional Law ..... Professor ARCHIBALD.

Notarial Course:

Theory and Practice of Notarial Deeds and Proceed- }
ings ..... } Lecturer HART.

FACULTY REGULATIONS.

1. Any person desirous of becoming a Matriculated Student shall apply to the Dean of the Faculty for examination and entry in the Register of Matriculation, and shall procure a ticket of Matriculation and tickets of admission to the Lectures for each Session of the Course. Students are requested to call on the Registrar, who will furnish them with the necessary forms.

2. Candidates for Matriculation shall pass an examination, satisfactory to the Faculty of Law, in Latin, French, English, Mathematics, and Ancient and Modern History, and the books upon which such examination shall be had shall be from time to time fixed by the Faculty.

II. MATRICULATION IN THE FACULTY OF LAW.

The books at present prescribed are the following:

Latin.—Virgil, Æneid, Book I.; Cicero, Orations I. and II. against Catiline; Latin Grammar.

French.—De Fivas' "Grammaire des Grammaires;" *Molière, "Le Bourgeois Gentihomme;" †Translation into French of Macaulay's Essay on Frederick the Great.

Exercises in composition and grammatical analysis, in English and French.

Mathematics.—Arithmetic; Algebra to the end of simple equations; Euclid, Books I., II., III.

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History.—White's Outline of Universal History (or any eqnivalent manual), *Green's Short History of the English People ; Miles' School History of Canada ; †Duruy, Histoire de France.

Literature.—*Collier's Biographical History of English Literature ; †Laharpe, Cours de Litérature ; †Lefranc, Cours de Litérature.

Rhetoric.—Whately's Rhetoric ; Blair's Lectures (small edition).

Philosophy.—*Whately's Logic ; †Logique de Port Royal ; †Cousin, Histoires de la Philosophie ; *Stewart's Outl.ne of Moral Philosophy.

N.B.—The works mentioned above preceded by an asterisk are for English students only. Those preceded by a cross are for French students only. The remainder are for both English and French.

3. Students in Law shall be known as of the First, Second and Third Years, and shall be so graded by the Faculty. In each year, Students shall take the studies fixed for that year, and those only, unless by special permission of the Faculty.

4. The Register of Matriculation shall be closed on the 1st of November in each year, and return thereof shall be immediately made by the Dean to the Registrar of the University. Candidates applying thereafter may be admitted on a special examination to be determined by the Faculty ; and, if admitted, their names shall be returned in a supplementary list to the Registrar.

5. Persons desirous of entering as Occasional Students shall apply to the Dean of the Faculty for admission as such Students, and shall obtain a ticket, or tickets for the class or classes they desire to attend.

6. Students who have attended Collegiate courses of study in other Universities, for a number of terms or sessions, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty.

7. All Students shall be subject to the following regulations for attendance and conduct :—

(1) A class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted ; and the said class-book shall be submitted to the Faculty at a meeting to be held between the close of the lectures and the commencement of the examinations ; and the Faculty shall, after examination of such class-book, decide which students shall be deemed to have been sufficiently regular in their attendance to entitle them to proceed to the examination in the respective classes.

(2) Punctual attendance on all the classes proper to his year is required of each student. Professors will note the attendance immediately on the commencement of their lectures, and will omit the names of Students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class-room, if persisted in after admoni-

tion by the Professor, will be reported to the Dean of the Faculty, who may reprimand the Student or report to the Faculty, as he may decide. While in the building, or going to or from it, students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the Class-rooms, or elsewhere in the building, will admonish the student ; and, if necessary, report him to the Dean.

(3) When Students are reported to the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes or honours, suspend from classes, or report to the Corporation for expulsion.

(4) Any Student injuring the furniture or building will be required to repair the same at his own expense, and will, in addition, be subject to such penalty as the Faculty may see fit to impose.

( ) The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

(6) All cases of discipline involving the interests of more than one Faculty, or of the University generally, shall be reported to the Principal, or, in his absence to the Vice-Principal.

8. The College year shall be divided into two terms, the first extending to the Christmas vacation, and the second from the expiration of the Christmas vacation to the 9th of April following.

Four Professors shall deliver their courses of lectures during the first term, and three during the second term in each year. Each Professor shall lecture daily during his course, and each lecture shall be of one hour's duration ; but the Professors shall have the right to substitute an examination for any such lecture.

9. At the end of each term there shall be a general examination of all the classes, under the superintendence of the Professors, and of such other examiners as may be appointed by the Corporation ; which examination shall be conducted by means of printed questions, answered by the students in writing in the presence of the Examiners. The result shall be reported as early as possible to the Faculty.

After the examinations at the close of the second term, the Faculty shall decide the general standing of the students, taking into consideration the examinations of both terms, both of which examinations shall be considered the Sessional or Final Examinations for the college year, as the case may be.

10. No Student shall be considered as having kept a Session, unless he shall have attended regularly all the courses of Lectures, and shall have passed the Sessional Examinations to the satisfaction of the Faculty in all the classes of his year.

11. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any Student from attendance on any particular Course

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or Courses of Lectures, but no distinction shall, in consequence, be made between the Examinations of such Students and those of the Students regularly attending Lectures. No Student shall pass for the degree of B.C.L. unless he has prepared a Thesis, either in French or English, which shall have been approved by the Faculty.

12. The subject of such Thesis shall be left to the choice of the Student, but it must fall within the range of study of the Faculty, and shall not exceed twenty pages of thirty lines each. Each Student shall, on or before the first day of March, forward such Thesis to the Registrar of the Faculty, marked with the *nom de plume* which he shall adopt, and accompanied with a sealed envelope, bearing the same *nom de plume* on it, and containing inside his name and the subject of his Thesis, and the envelope shall be opened in presence of the Faculty after the final decision shall be given on the respective merits of the several Theses.

13. The Elizabeth Torrance Gold Medal, in the Faculty of Law, shall be awarded to the Student who, being of the Graduating Class, having passed the Final Examinations, and having prepared a Thesis of sufficient merit in the estimation of the Faculty to entitle him to compete, shall take the highest marks in a special Examination for the medal, which examination shall include the subject of Roman Law.

14. Every Candidate, before receiving the Degree of B.C.L., shall make the following declaration :

Ego A. B. polliceor, me, pro viribus meis, studiosum fore communis hujus Universitatis boni, operamque daturum ut decus ejus ac dignitatem amplificem, et officiis omnibus ad Baccalaureatus in Jure Civili gradum pertinentibus fungar.

15. The fees in this Faculty are as follows :

Matriculation Fee	$ 5 00
Sessional Fee by Ordinary Students	36 00
Sessional Fee by Occasional or Partial Students, for each course	5 00
Graduation Fee, including Diploma and Case	10 00
Additional Fee for Notarial Students	10 00

Matriculation and Sessional Fees must be paid on or before Nov. 1st, and if not so paid the name of the Student shall be removed from the books, but may be re-entered by consent of the Faculty, and on payment of a fine of not less than $3 Students already on the books of the University shall not be required to pay any Matriculation Fee.

16. The Course of Lectures upon the Theory and Practice of Notarial Deeds and Proceedings is optional to candidates for the profession of law, but is compulsory upon candidates for the Notarial profession ; the latter may omit the subject of Civil Procedure.

17. Notarial students shall rank for general standing upon their examination

in the notarial class, and failure to pass such examination shall have the same effect as failure in any other compulsory subject.

18. Occasional students may be admitted into said class on such terms as shall be arranged by the Faculty.

19. Every Candidate for the Degree of D.C.L. in course, under Chap. VIII., Section 4, of the Statutes of the University, shall be required to pass within four years from his graduation as B.C.L. such examination as shall be prescribed by the regulations of the Faculty of Law ; unless he shall have graduated as a B.A. of this University, either in Course or *ad eundem*. And not less than two months before proceeding to the Degree of D C.L.. the Candidate shall deliver to the Faculty of Law twenty-five printed copies of a Thesis or Treatise upon a subject selected or approved by the Faculty ; such Thesis to contain not less than twenty-five octavo pages of printed matter, and possessing such degree of literary and scientific merit as shall, in the opinion of the Faculty, justify them in recommending him for that Degree. And in addition to the foregoing qualifications, the Candidate shall pay to the Secretary of the Faculty annually during term, for the retention of his name on the Books of the Faculty, during the said period of twelve years, a fee of two dollars, to be added to the Library Fund of the Faculty.

Except as regards the Thesis, this regulation applies only to those who have taken the degree of B. C. L. subsequently to October, 1873. The examination under the above rule is as follows :

(1) *International Law :—*

Phillimore : Wharton, Conflict of Law ; Fœlix, Droit International Privé.

(2) *Roman Law :*

Gaii Commentarii, IV.; Pauli Sententiæ ; Pomponii Fragmentum de origine juris. D. 1, 2 ; Novellæ Justiniani, cxxviii cxxvii ; Ortolan, Institutes de Justinien, Vol. i. ; Mommsen's History of Rome.

(3) *Constitutional Law :—*

Hallam, Constitutional History of England ; May, Constitutional History of England ; Mill, Representative Government ; The British North America Act, and cases thereunder.

TABLE OF LECTURES IN THE FACULTY OF LAW.

SESSION OF 1887-8.

	Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
First Year. First Term.	4.30	Civil Law.	Roman Law.	Civil Law to 6th November. Thereafter Roman Law.	Roman Law.	Civil Law.
First Year. First Term.	5.30	Criminal Law.	Civil Procedure.	Criminal Law to 6th Nov. Thereafter Civil Procedure.	Civil Procedure.	Criminal Law.
First Year. Second Term.	4.30	Legal History.	Commercial Law.	Legal History to 15th Feb. Thereafter Commercial Law.	Commercial Law.	Legal History.
Second and Third Years. First Term.	4.30	Roman Law.	Civil Law.	Roman Law to the 6th Nov. Thereafter Civil Law.	Civil Law.	Roman Law.
Second and Third Years. First Term.	5.30	Civil Procedure.	Criminal Procedure.	Civil Procedure to 6th Nov. Thereafter Criminal Procedure	Criminal Procedure.	Civil Procedure.
Second and Third Years. Second Term.	4.30	International Law.	International Law.	International Law.	International Law.	International Law.
Second and Third Years. Second Term.	5.30	Commercial Law.	Legal Bibliography.	Commercial Law to 15th Feb. Thereafter Legal Bibliography.	Legal Bibliography.	Commercial Law.

University School Examinations

1888.

UNDER THE SUPERINTENDENCE OF McGILL UNIVERSITY, MONTREAL, AND THE UNIVERSITY OF BISHOP'S COLLEGE, LENNOXVILLE, AND SANCTIONED BY THE PROTESTANT COMMITTEE OF THE COUNCIL OF PUBLIC INSTRUCTION.

FOR CERTIFICATES OF THE UNIVERSITIES AND THE TITLE OF ASSOCIATE IN ARTS.

These Examinations are held in Montreal and at Lennoxville; and local centres may be appointed elsewhere on application to the Principal of either University, accompanied with satisfactory guarantee for the payment of necessary expenses.

The Examinations are open to Boys or Girls, from any Canadian School.

SUBJECTS OF EXAMINATION.

I. PRELIMINARY SUBJECTS.

English Reading	30	*Marks.*
Writing	30	do
English Dictation	50	do
English Grammar	50	do
Arithmetic (all the ordinary rules, including square root)	100	do
Geography (acquaintance with the maps of each of the four continents, and of British North America)	50	do
British History, and *Canadian History*	50	do

The Candidates will also be examined in the Gospels, unless objection be made thereto by their parents or guardians, and creditable answering in the same will be mentioned in the Certificate.

II. OPTIONAL SUBJECTS.

Section 1. Languages.

Latin :—

Cæsar.—Bell. Gall, Bk. I. Virgil.—Æneid, Bk. II., vs. 1 to 300.* Cicero.—In Catilinam, Orat. I.	150 marks.

* Instead of Book II., vs. 1 to 300, candidates may take Bk. I. on giving notice to the Examiner on or before May 1st.

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Greek :—

Xenophon.—Anabasis Bk. I.
Homer.—Iliad. Bk. IV. } 150 do

French :—

Grammar, Dictation.
Darey's Lectures Françaises or Duval's lectures choisies.
Re-translation English into French. } 120 do

German :—

Grammar.
Adler's Reader, Section II.
Translation from German into English. } 120 do

Section 2. Mathematics, Natural Philosophy, &c.

Geometry :—

Euclid, I., II., III ..... 150 do

Algebra :—

Elementary Rules, Involution, Evolution, Fractions, Simple Equations. } 150 do

Plane Trigonometry.

(As in Hamblin Smith, pp. 1-100, omitting Ch. XI. 100 do

Natural Philosophy.

Mechanics and Hydrostatics (as in any ordinary School Text-Book). } 100 do

Geometrical and Freehand Drawing ..... 100 do

Geometrical.—Vere Foster R^1, R^2, and R^3, problems 119 to 127. *Freehand*—Rules of Perspective, Drawing from the object.

Section 3. English.

The English Language.

Mason's Grammar, including derivation and omitting appendix.
Trench's Study of Words. } 120 do

English Literature.

English Literature, Primer by S. A. Brooke.
Shakespeare, Julius Cæsar.
Scott's Lady of the Lake. } 120 do

History.— (As in Primers of Greece and Rome, and either of the following, namely : Collier's Great Events, or Maclear's Old and New Testaments).

Geography.—Physical, Political and Commercial, (as in Calkin's Advanced) ..... 100 do

Section 4. Natural Science, &c.

Zoology (as in Nicholson's Introductory Text-Book).....	100	do
Botany (as in Gray's "How Plants Grow".....	100	do
Geology (as in Dana's Text Book).....	100	do
Chemistry (as in Remsen's Elements of Chemistry pp. 1 to 198),	100	do

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GENERAL REGULATIONS.

1. Candidates will not be considered as having passed in any subject, unless they have obtained at least *one-third* (and, in the case of Reading and Dictation, *two-thirds*) of the total number of marks obtainable in that subject.

2. Every Candidate for the Certificate of Associate in Arts, or for the Junior Certificate, must pass in all the Preliminary Subjects.

3. Every Candidate for the Certificate of Associate in Arts must also pass in the Optional Subjects contained in one of the three following groups:

First.—(*a*) Two Subjects of Section 1, one of them being Latin or Greek.
(*b*) Geometry or Algebra of Section 2.
(*c*) Two of the eight Subjects of Sections 3 and 4.

Second.—(*a*) French and German of Section 1.
(*b*) Geometry or Algebra of Section 2.
(*c*) Two Subjects of Section 3.
(*d*) One Subject of Section 4.

Third.—(*a*) One Subject of Section 1.
(*b*) Two Subjects of Section 2.
(*c*) Three of the eight Subjects of Sections 3 and 4.

4. Candidates for Junior Certificates must pass in the following:
(*a*) One Subject of Section 1.
(*b*) One Subject of Section 2.
(*c*) One of the eight Subjects of Sections 3 and 4.

5. The total number of Marks gained by every Candidate, in both the preliminary Subjects (except Reading) and Optional Subjects, shall be added up, and the Candidates arranged in a printed list, at the close of the Examination; those who are under 18 years of age on the first day of the examination in the order of these totals; those over 18 years of age alphabetically. No marks in any subject shall be counted, unless the Candidate has gained at least the minimum number of Marks required for passing in that subject. [The marks in not more than three subjects of section 1, three subjects of section 2, and three subjects selected

*Recommended in preference to Miller.

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form sections 3 and 4, will be counted. Candidates taking one classical and one modern language may, instead of a third language, take an additional subject of section 4, with Geometrical or Freehand Drawing (150 marks in the aggregate). Candidates who take two modern languages may take an additional subject of section 4, with drawing as above, to be reckoned at 180 marks.]

6. Candidates who obtain at least *two-thirds* of the marks in any Optional Subject will be entitled to a Certificate of creditable answering in that Subject, provided they satisfy the conditions for either Associate in Arts or Junior Certificate.

7. Associates in Arts who have passed in Latin, Greek,* Algebra and Geometry, may, without further examination, enter the Faculties of Arts of the two Universities. Those who have passed in Algebra and Geometry may enter the Faculty of Applied Science of McGill University.

8. Candidates who fail, or who may be prevented by illness from completing their examinations, may come up at the next examination without extra fee.

9. The Head Master or Mistress of each school must certify to the character and ages of the pupils sent up for examination.

10. The examinations will begin on Friday, June 1st, at 9 a.m.

11. List of the names, ages, and Optional Subjects to be taken by the candidates, together with the fee of $4 for each Candidate, must be transmitted to the Secretary of McGill University on or before May 1st. (Blank forms and copies of the Regulations will be furnished on application.)

CLASSICAL SUBJECTS FOR 1889.

Greek:—Xenophon, Anabasis, Book I.
Homer, Iliad, Book IV.

Latin:—Cæsar, Bell. Gall. Book I.
Virgil, Æneid, Book II., vss. 1 300.
Cicero, in Catilinam, Orations I and II.

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* For women entering McGill, Greek will not be required.

EXTRACTS FROM THE REGULATIONS OF THE PROTESTANT COMMITTEE OF THE COUNCIL OF PUBLIC INSTRUCTION OF THE PROVINCE OF QUEBEC.

EXAMINATION OF PROTESTANT ACADEMIES.

I. *Conditions of the Examinations.*

1. There shall be an annual written examination of the Protestant Academies and Model Schools held simultaneously under the direction of local deputy-examiners, appointed by the Protestant Committee.

2. The examination papers for the University School Examination shall be adopted for Grade III. of the Academies. The pupils of this grade shall be examined in the preliminary subjects, and in Group A, or Group B, of the optional subjects, as follows :—

OBLIGATORY.	OPTIONAL.	
PRELIMINARY.	GROUP A.	GROUP B.
1. Reading, Writing, Dict.	1. Latin.....	1. French.
2. Sacred History.....	2. Greek or French.....	2. Geometry.
3. Arithmetic.....	3. Geometry.....	3. Algebra.
4. Grammar.....	4. Algebra.....	4. English Literature.
5. Geography (Elementary).....	5. English Literature....	5. History.
6. British and Canadian History..... ...	6. One of the following: History, Geography, Chemistry, or Botany.	6. One of the following: Geography, Chemistry or Botany.

3. The examination of Grade III., Academies, shall be in accordance with the standard prescribed in the authorized course of study for that grade, and in passing in the same, the pupils shall be recommended to the Universities for the itle of Associates in Arts or for Junior Certificates.

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4. The examination papers, including those for A. A. examination, shall be distributed from the Department of Public Institution by the Inspector of Superior Schools, and the answers of the pupils shall be returned to the Department in accordance with instructions to deputy-examiners.

II. *Privileges granted to successful pupils.*

1. Pupils who have passed for the Associate in Arts, and have taken two-thirds of the aggregate marks, and who have passed in French, shall be eligible, without further examination, to enter the Model School class of the McGill Normal School.

2. Pupils who have passed for the Associate in Arts, and who may present themselves before any Board of Examiners, in order to obtain Diplomas as teachers, shall be exempted from the Examinations in any subject (except French, Algebra, Geometry, Latin and Greek, in the case of candidates for Academy Diplomas) in which they have taken two-thirds of the marks in the Associate in Arts examinations.

3. Associates in Arts, who have passed in Latin,* Greek, Algebra, and Geometry, may enter the Faculties of Arts of the two Universities, without further examination. Those who have passed in Algebra and Geometry may enter the Faculty of Applied Science of McGill University.

4. The examiners for the Associate in Arts will furnish successful pupils with evidence of their qualifications with reference to the above.

NOTE.—No fees will be exacted for the examination of pupils of Academies under the control of the Protestant Committee ; but in order to obtain the certificates, the prescribed fees, viz.,$4.00 for A. A. certificates and $2.00 for junior certificates, must be paid to the Secretary of McGill University.

*For women entering McGill, Greek will not be required.

Passed the University Examinations.

SESSION 1886–7.

FACULTY OF LAW.

PASSED FOR THE DEGREE OF B.C.L.

Murchison, Roderick L., Dundee, Q.
Beauregard, Henri A., St. Hyacinthe
Buie, Hector, Montreal.
Burroughs, William H., Montreal.
Bricot, Joseph "

FACULTY OF MEDICINE.

PASSED FOR THE DEGREE OF M.D., C.M.

(Arranged Alphabetically.)

Aborn, W. H.
Berry, J. A.
Blackadder, E. H. P., B.A.
Boone, S. W., B.A.
Bowen, W., B.A.
Boyd, Jay.
Cameron, K., B.A.
Christie, W., B.A.
Cowie, A. M.
Dickson, J. A., B.A.
Easton, C. L.
Edgar, C. J.
Ellis, W. E.
Evans, E. J.
Flagg, J. D.
Fillmore, E. W.
Fraser, J. M.
Gardner, A. W.
Hall, A. G.
Hall, W.
Hamer, A. L.
Johnson, J. W.
Kelly, J. A. A.
Lafferty, A. M.
Lafleur, H. A., B.A.
Loucks, W. F.
Macdonald, A. D.
McDonald, A. L.
McDonald, D. D.
McKinnon, H.
Morgan, V. H.
Norman, T. J.
Porter, J. A., B.A.
Pothier, J. C.
Reavely, E.
Richardson, G. C.
Ross, D. L.
Scott, J. M.
Scully, D. J.
Stephen, G. C.
Trapnell, H. E.
Warneford, P. H.
Wilkins, H. P.
Williams, E. P.
Young, A. A.

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PASSED THE PRIMARY EXAMINATION.

(Arranged Alphabetically.)

Aborn, W. H.
Baer, D. C.
Bell, J. H., B.A.
Bowen, W., B.A.
Brown, G. A.
Berry, J. A.
Cameron, J. J.
Castleman, A. L.
Campbell, G. G., B.Sc.
Chalmers, W. W., B.A.
Creasor, J. C., B.A.
Delaney, W. J.
Dewar, C. P.
England, W. S.
Garrow, A. E.
Gemmill, E. W.
Goodwin, W. W.
Holmes, A. D.
Hopkins, F. A.
Lafferty, A. M.
Kincaid, R. J.
Martin, J. Mr.
Mathieson, C. S.
Moorehouse, O. E.
Mowat, M. M.
Muirhead, D. A.
Murray, D. A.
McDonald, A.
McDonald, A. L.
McDonald, H. N.
McDonald, P. A.
McCurdy, T.
McIntosh, D. H.
McLellan, A. A.
McKinnon, T. H.
McKercher, H.
Porter, J. A., B.A.
Philp, W. S.
Quirk, E. L.
Shanks, A. L.
Stewart, W. G., B.A.
Taylor, W. B., B.A.
Vipond, A. E.
Whyte, J. J.
Woodruff, T. A.
Young, H. E., B.A.

FACULTY OF ARTS.

PASSED FOR THE DEGREE OF B.A.

In Honours.

(Alphabetically arranged.)

First Rank.—Cameron, Wellington A.
Clay, W. Leslie.
Colby, Charles W.
Johnson, Alexander R.
Nicholson, John A.
Patton, Hugh M.
Rochester, W. M.
Walsh, James B.

Second Rank.—Henderson, Robert B.
Naismith, James.

Ordinary.

(In order of Merit.)

McGill College.

Class I.—Johnston, Robert.
Brown, Samuel R.
MacArthur, Archibald.

Class II.—McLennan, M.
Langton, J. F.
Kingston, Charles B.
Gerrie, John P. } equal.
Sanders, William }
Nichols, William A.

Class III.—McLeod, Murdoch J.
Whyte, Charles W.
Solandt, Andrew P.
Russell, Walter.
Bourne, Nicholas A. F.

Aeger.—Murray, Alfred P., *First Class Standing.*

Morrin College.

Class I.—Laurie, Archibald.

Class II.—Rivard, Edmund S.

BACHELORS OF ARTS PROCEEDING TO THE DEGREE OF M.A. IN COURSE.

Lafleur, Paul T. B.A.
Parent, Manasseh B., B.A.

MASTERS OF ARTS PROCEEDING TO THE DEGREE OF LL.D. IN COURSE.

Ells, Robert, M.A.
Krans, Edward H., M.A.
Chapman, Charles, M.A.
Shaw, William J., M.A.

ADMITTED "AD EUNDEM GRADUM."

Rev. William J. Smyth, B.A., 1881 (Queen's University, Kingston).

PASSED THE INTERMEDIATE EXAMINATION.

McGill College.

Class I.—Gibson, William D.
Wilson, Alice M.
Deeks, William E.
Squire, Maude M.

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Class II.—Reid, Helen R. Y.
Rogers, William.
Stevenson, J. J.
Jamieson, Walter L.
Class III.—Garth, William H.
Robertson, James.
Truell, Harry V.
Holden, Donald B.
Henderson, Mary H.
Mackenzie, Robert T.
Meighen, F. S.
Walsh, Thomas N.

Morrin College.

Class I.—Sloane, Edith J.
Class II.—Parker, John.
McLeod, Euphemia.
Smith, George H.
Whitelaw, James M.
Lamont, John J.
Class III.—Robertson, Adam.

St. Francis College.

Class III.—Reed, F. W.
Parker, John.

FACULTY OF APPLIED SCIENCE.

Civil Engineering (*Ordinary Course*).

IN ORDER OF MERIT.

Robert Edward Palmer, Victor Frederick William Forneret, John Plaw Ball, Daniel Taylor, James Marmaduke McCarthy.

Civil Engineering (*Course of Topographical Surveying.*)

Raoul Rinfret.

Mining Engineering (*Advanced Course.*)

William Arthur Carlyle.

Mining Engineering (*Ordinary Course.*)

Walter Frederick Ferrier.

BACHELOR OF APPLIED SCIENCE PROCEEDING TO THE DEGREE OF MASTER OF ENGINEERING IN COURSE.

William Johnston Sproule.

Scholarships and Exhibitions.

SESSION 1886-87.

FACULTY OF ARTS.

I. SCHOLARSHIPS (Tenable for two years).

Year of Award.	Names of Scholars.	Subject of Examination.	Annual Value.	Founder or Donor.
1885	Johnson, Alex. R.	Mathematics.	125	W. C. McDonald.
1885	Johnston, Robert.	Mathematics.	125	Prof. Johnson.
1885	Murray, Alfred P.	Nat. Science.	125	W. C. McDonald.
1885	Patton, Hugh M.	Class.&Mod.Lang	125	W. C. McDonald.
1885	Brown, Samuel R.	Class.&Mod.Lang	120	Chs. Alexander.
1886	Le Rossignol, Jas.E.	Nat. Science.	125	W. C. McDonald.
1886	Day, John L.	Class.&Mod.Lang	125	W. C. McDonald.
1886	Bryan, Andrew.	Class.&Mod.Lang	125	Barbara Scott.

II. EXHIBITIONS (Tenable for one year).

NAMES OF EXHIBITIONERS.	Academic Year.	Annual Value.	Founder or Donor.
Giles, Wm. J.	Third	$125	W. C. McDonald.
Deeks, Wm. E.	Second	125	George Hague.
McDougall, Robt.	First	125	W. C. McDonald.
Nicholls, A. G.	"	125	W. C. McDonald.
Robertson, A. A.	"	125	W. C. McDonald.
Reed, Thos. B.	"	125	W. C. McDonald.
Trenholme, Ed. C.	"	100	Mrs. Redpath.
Fry, F. M.	"	100	Major H. Mills.

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Prizes, Honors and Standing.

SESSION 1886-7.

FACULTY OF LAW.

GRADUATING CLASS.

First Rank Honours and Elizabeth Torrance Gold Medal and Prize in International Law.—RODERICK LIVINGSTONE MURCHISON.

First Rank Honours and Second Prize for General Proficiency.—HENRI A. BEAUREGARD.

First Rank Honours and Prize in International Law.—HECTOR BUIE.

Second Rank Honours.—WILLIAM BURROUGHS.

Prize for Thesis.—JOSEPH BRIOT DIT LAMARCHE.

Standing in the Several Classes.

INTERNATIONAL LAW.—
First, BUIE.
Second, MURCHISON.

ROMAN LAW.—
First, MURCHISON.
Second, BUIE.

CRIMINAL LAW.—
First, BEAUREGARD.
Second, MURCHISON.

LEGAL HISTORY.—
First, MURCHISON.
Second, BEAUREGARD.

CIVIL LAW.—
First, MURCHISON and BEAUREGARD, equal.
Second, BUIE.

COMMERCIAL LAW.—

First, MURCHISON.
Second, BEAUREGARD and BUIE, equal.

SECOND YEAR.

First Rank Honours and First Prize for General Proficiency—JOHN M. FERGUSON.

First Rank Honours and Second Prize for General Proficiency—ROBERT A. DUNTON.

Second Rank Honours.—HENRY FRY.

Passed the Sessional Examination in Order of Merit.

John M. Ferguson, St. Anicet, Que., Robert A. Dunton, Henry Fry, Hambury, Budden, B.A., John F. Reddy, Archibald M. Craigie, of Montreal.

Standing in the Several Classes.

INTERNATIONAL LAW.—

First, BUDDEN and DUNTON, equal.
Second, FERGUSON.

ROMAN LAW.—

First, FERGUSON and DUNTON, equal.
Second, FRY.

CRIMINAL LAW.—

First, DUNTON and FERGUSON, equal.
Second, FRY.

LEGAL HISTORY.—

First, FERGUSON.
Second, DUNTON.

CIVIL PROCEDURE.—

First, FERGUSON.
Second, DUNTON.

CIVIL LAW.—

First, FRY.
Second, FERGUSON.

COMMERCIAL LAW.—

First, FERGUSON.
Second, REDDY.

FIRST YEAR.

First Rank Honours and First Prize.—R. H. CLERK.
First Rank Honours and Second Prize.—FRANCIS TOPP.

Passed the Sessional Examinations.

R. H. Clerk, Francis Topp, Charles A. Barnard, G. P. England, H. Tellier.

Standing in the Several Classes.

ROMAN LAW.—

First, CLERK.
Second, TOPP.

CRIMINAL LAW.—

First, CLERK.
Second, TOPP.

LEGAL HISTORY.—

First, CLERK and ENGLAND, equal.
Second, TOPP.

CIVIL PROCEDURE.—

First, BARNARD and CLERK, equal.
Second, TOPP.

CIVIL LAW.—

First, CLERK.
Second, BARNARD and TOPP, equal.

COMMERCIAL LAW.—

First, CLERK and TOPP, equal.
Second, BARNARD.

FACULTY OF MEDICINE.

THE HOLMES GOLD MEDAL.—EDWARD EVANS, Seaforth, Ontario.

Prize for the best Final Examination.—HENRI A. LAFLEUR, B.A., Montreal.

Prize for the best Primary Examination.—ALEXANDER E. GARROW, Ottawa, Ont.

THE SUTHERLAND GOLD MEDAL.—JOHN A. CREASOR, of Owen Sound, Ont.

The following gentlemen, arranged in order of merit, deserve honourable mention:—

In the Primary Examination.—H. McKercher, G. G. Campbell, J. A. Creasor W. S. England, W. G. Stewart, H. E. Young, D. H. McIntosh, G. A. Brown, D. A. Murray.

In the Final Examination.—J. M. Fraser, J. A. Kelly, D. L. Ross, W. Hall, A. L. Hamer, T. J. Norman, A. D. McDonald, W. Christie, E. H. P. Blackader, and J. W. Johnson.

PROFESSOR'S PRIZES.

Botany.—Robert McKechnie, Winnipeg.

Practical Anatomy.—Demonstrator's Prizes.—2nd Year, W. G. Stewart. 1st Year, R. McKechnie.

Obstetrics.—Ed. Evans, Seaforth, Ont.

Pathology.—O. H. Hubbard, Gilsam, New Hampshire.

The detailed lists of Standing in the several classes will be found in the special announcement of the Medical Faculty.

FACULTY OF ARTS.

GRADUATING CLASS.

B.A. Honours in Mathematics and Natural Philosophy.

JOHNSON, ALEXANDER R.—First Rank Honours and Anne Molson Gold Medal.

B.A. Honours in Classics.

ROCHESTER, WILLIAM M.—First Rank Honours and Chapman Gold Medal.

B.A. Honours in Natural Science.

WALSH, JAMES B.—First Rank Honours and Logan Gold Medal.

B.A. Honours in Mental and Moral Philosophy.

CLAY, W. LESLIE.—First Rank Honours and Prince of Wales Gold Medal.
CAMERON, WELLINGTON A.—First Rank Honours.
HENDERSON, ROBERT B.—Second Rank Honours.
NAISMITH, JAMES P.—Second Rank Honours.

B.A. Honours in English Language, Literature and History.

COLBY, CHARLES W.—First Rank Honours and Shakspere Gold Medal.
NICHOLSON, JOHN A.—First Rank Honours and Special Prize.

B.A. Honours in Modern Languages.

PATTON, HUGH M.—First Rank Honours.

Special Certificates.

JOHNSTON, ROBERT.—Lansdowne Gold Medal.
BROWN, SAMUEL R.
MCARTHUR, ARCHIBALD.
LAURIE ARCHIBALD, (*Morrin College.*)

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THIRD YEAR.

GILES, WM. JAMES.—First Rank Honours in Natural Science ; First Rank General Standing ; Prize in Zoology.

DAY, JOHN L.—First Rank Honours and Prize in Classics ; First Rank General Standing ; Prize in French.

LE ROSSIGNOL, JAMES E.—First Rank Honours and Prize in Natural Science ; First Rank General Standing.

MARTIN, CHARLES F.—First Rank Honours and Prize in English Language Literature and History ; Prize in German.

PEDLEY, HILTON.—First Rank Honours and Prize in Mental and Moral Philosophy.

LINDSAY, NORMAN.—First Rank Honours and Prize in Mental and Moral Philosophy.

CAMPBELL, C. A.—Second Rank Honours in Natural Science.

BRYAN, ANDREW C.—Second Rank Honours in English Language, Literature and History.

BRYSON, ALFRED P.—Second Rank Honours in Mental and Moral Philosophy.

MACALLUM, FREDERICK W.—First Rank General Standing ; Prize in Hebrew.

MORISON, JOHN A.—First Rank General Standing.

PASSED THE SESSIONAL EXAMINATIONS OF THE THIRD YEAR.

Giles, Macallum ; Cross and Day, equal ; Ritchie, Campbell ; Le Rossignol and Hunter, equal ; Martin, McKee, McPhail, Simpson, Morison, Howitt, Bryan, Lindsay, Evans, Pedley, Massé, Naismith ; Mason and Palmer, equal ; Murray, Bryson, Duke, Murphy (*Aegra*).

SECOND YEAR.

GIBSON, WILLIAM D.—(Morrisburg High School).—First Rank General Standing Prize in Logic ; Prize in German.

DEEKS, WILLIAM E.—(Morrisburg High School).—First Rank General Standing, Prize in Hebrew ; Prize in Botany.

PASSED THE SESSIONAL EXAMINATIONS OF THE SECOND YEAR.

Gibson, Wilson, Deeks, Squire, Reid, Rogers, Stevenson, Jamieson (W.L.), Garth, Robertson, Truell, Holden, Henderson, Mackenzie, Meighen, Walsh.

FIRST YEAR.

TORY, HENRY M.—(Guysboro' Academy, N.S.)—First Rank Honours and Prize in Mathematics, First Rank General Standing, Prize in Chemistry.

MCDOUGALL, ROBERT (Huntingdon Academy, P.Q.).—First Rank Honours and Prize in Mathematics, First Rank General Standing, Prize in Latin, Prize in Greek, Prize in Chemistry.

NOTE.—At the First Year Sessional Examinations, April, 1886, Deeks and Gibson, obtained First Rank General Standing. The announcement was accidentally omitted in the Calendar.

CORCORAN, ARTHUR J.—(Waterloo Academy, P.Q.)—First Rank General Standing, Prize in French.

NICHOLLS, ALBERT G.—(High School, Montreal).—First Rank General Standing, Prize in Ancient History.

DALEY, JAMES.—(Uxbridge High School, Ont.)—First Rank in General Standing, Prize in English, Prize in German.

SUTHERLAND, HUGH C.—(Private Tuition), Prize in Hebrew.

PASSED THE SESSIONAL EXAMINATION OF THE FIRST YEAR.

Williams, McDougall, Abbott, Corcoran, Nicholls, Daley, Scott (S. B.), Tory, Robertson, Sutherland, Hall (A. R.), Davidson (P.), Mack, Reed, Botterell (J. T.); Hall (R. S.), Colclough, Trenholme, Macfarlane (M.), Elliot, Kinghorn, Botterell, (H. I.), Cameron, Tolmie, McDuffee; Fry and Davidson (C. F.), equal; Berwick, Hunter, Walsh, Paton, Ross, Ault, Martell, Mathewson, Finch, MeGregor.

Neil Stewart Prize in Hebrew.

MCLENNAN M.—Fourth Year Student.

Early English Text Society's Prize.

NICHOLSON, JOHN A.—Fourth Year Student.

At the Examinations in September, 1886, the following *Scholarships* and *Exhibitions* were awarded:—

SCHOLARSHIPS—TENABLE FOR TWO YEARS.

THIRD YEAR.—*Classical and Modern Language Scholarships.*—*Day, John L.; §Bryan, A.

THIRD YEAR.—*Natural Science Scholarship.*—*LeRossignol, I. E.

EXHIBITIONS—TENABLE FOR ONE YEAR.

THIRD YEAR.—*Natural Science Exhibition.*—*Giles, Wm. J.

SECOND YEAR.—†Deeks, Wm. E. (Morrisburg, High School, O.).

FIRST YEAR.—*McDougall, R. (Huntingdon Academy, P.Q.); *Nicholls, A. G. (High School, Montreal); *Robertson (A. A.) (High School, Montreal); *Reed, T. B. (High School, Montreal); ‡ Trenholme, E. C. (High School, Montreal); ‡‡Fry, F. M. (High School, Montreal).

* Value of Scholarship or Exhibition, $125 yearly; founder, W. C. MacDonald, Esq. Value, $125 yearly; donor, George Hague, Esq.

‡ Value, $100 yearly; founder, Mrs. Jane Redpath.

§ Value, $125 yearly; founder, Miss Barbara Scott.

‡‡Value, $100 yearly; founder, Major H. Mills.

SESSIONAL EXAMINATIONS, 1887.

McGill College.

*The asterisk * in the following lists indicates Partial or Occasional Students.*

Prizes are awarded to Undergraduates only.

ORDINARY COURSE IN ARTS.

GREEK.

B.A. ORDINARY.—*Class I.*—Brown, Rochester, Johnston. *Class II.*—MacArthur, McLennan; Gerrie and Langton and Sanders, equal; Russell. *Class III.*—Solandt, Bourne.

THIRD YEAR.—*Class I.*—Day (*Prize*); Macallum, Simpson, Morison, Pedley *Class II.*—Campbell; Howitt and Lindsay and Mason, equal. *Class III.*—Duke, Thurlow.

SECOND YEAR.—*Class I.*—Gibson, Wilson, Squire, Deeks, Rogers. *Class II.*—Robertson; Garth and Henderson and Swanson, equal; Jamieson, Stevenson. *Class III.*—Truell, Meighen, McCusker, Holden, Walsh, Mackenzie.

FIRST YEAR.—*Class I.*—Abbott (*Prize*); McDougall (*Prize*); Colclough, Corcoran, Daly, Nicholls, Fry, Hall (R. S.); Davidson and Mathewson, equal; Reed, Robertson. *Class II.*—Hall (A. R.), Martell, Walsh; Mack and Kinghorn, equal; McDuffee; Sutherland and Tory, equal; Paton; Cameron and Elliott and Trenholme, equal; Ault and Hunter equal. *Class III.*—Cushing, McGregor, Tolmie; Cowie and Mills and Ross, equal; Berwick, Finch.

LATIN.

B.A. ORDINARY.—*Class I.*—Rochester; Brown and Colby, equal; Johnston, MacArthur. *Class II.*—Kingston, Nichols. *Class III.*—None.

THIRD YEAR.—*Class I.*—Day (*Prize*); Simpson (*Prize*); Morison; Bryan and Cross and McFee and McPhail, equal. *Class II.*—Martin, Murray, Palmer. *Class III.*—Bryson, Duke, Sweeny, Massé, Murphy, England.

SECOND YEAR.—*Class I.*—Gibson; Squire and Wilson, equal; Deeks and Rogers, equal; Stevenson, Henderson. *Class II.*—Reid, Swanson. *Class III.*—Robertson, Jamieson, *Turner, Holden, Walsh, Meighen; Mackenzie and Truell, equal; Garth and Moore, equal; McCusker.

SECOND YEAR.—(*Latin Prose Composition.*)—*Class I.*—Gibson, Squire, Wilson; Deeks and Henderson, equal. *Class II.*—Rogers and Swanson, equal; Reid, Stevenson. *Class III.*—Meighen, Holden, Walsh; Robertson and Jamieson, equal; Truell, Garth, McCusker.

FIRST YEAR.—*Class I.*—Williams (*Prize*); Abbott (*Prize*); McDougall (*Prize*); Colclough and Scott, equal; Corcoran, Hall (A. R.), Mack, Hall (R. S.), Davidson (P.); Daly and Davidson (C.) and Robertson, equal. *Class II.*—Martell; Cameron and Sutherland and Trenholme, equal; Botterell (J.); McDuffee and Nicholls, equal; Walsh; McFarlane and McGregor and Reed, equal; Botterell (I.) and Fry, equal; Elliott, Berwick Tory. *Class III.*—Hunter, Mathewson; Paton and Tolmie, equal; Ault Cushing, Kinghorn, Morgan, Mills; Cowie and Ross, equal; Finch, Hodges.

HONOUR EXAMINATIONS IN CLASSICS.

B.A. HONOURS.—First Rank Honours and Chapman Gold Medal.—Wm. M. Rochester.

THIRD YEAR HONOURS.—First Rank Honours.—John L. Day.

GREEK AND ROMAN HISTORY.

FIRST YEAR.—*Class I.*—Abbott (*Prize*); Williams (*Prize*); Nicholls (*Prize*); McDougall and Scott, equal; McDuffee, Sutherland, Tory, Ault, Botterell (Jeanie), Trenholme; Davidson (P.) and Mack and Paton, equal. *Class II.*—Robertson and Walsh, equal; Elliott and McFarlane and McGregor, equal; Reed; Corcoran and Fry, equal; Mathewson, Tolmie, Cowie, Colclough, Cushing; Daly and Kinghorn, equal. *Class III.*—Davidson (C.) and Quimby, equal; Botterell (Inez), Morgan, Cameron, Berwick, Mills; Hunter and Finch and Ross, equal; Hall (A. R.), Hall (R. S.), Hodges, Martell, Hill.

MENTAL AND MORAL PHILOSOPHY.

B.A. ORDINARY.—(*Moral Philosophy.*)—*Class I.*—Clay, Johnston (R.), Cameron, Kingston, Browne, Nichols, Langton, Naismith (J). *Class II.*—Gerrie and McArthur, equal; Henderson (R. B.) and McLennan (M.) and Whyte, equal; Solandt, McLeod (M. J.) and Sanders, equal; Bourne, Russell. *Class III.*—None.

B. A.—(*Additional Department in Mental and Moral Philosophy.—Class I.*—Clay Langton, Cameron, Henderson; Gerrie and Naismith (J.), equal. *Class II.*—Whyte. *Class III.*—Russell.

THIRD YEAR.—(*Additional Department in Mental Philosophy.*)—*Class I.*—Cross; Lindsay and Pedley, equal; McFee, Howitt, Baldwin, Kerruish, Mason. *Class II.*—Kerry, Francesco, Truax. *Class III.*—Murphy, Bartley, Hunt, England, Bryson, Shaw. *Prizes*—Cross and McFee; Pedley, Lindsay.

SECOND YEAR.—(*Logic*)—*Class I.*—Wilson, Gibson, Squire, *McBratney, Deeks, Robertson. *Class II.*—Stevenson, Reid, Jamieson, Truell, Rogers. *Class III.*—Garth and Henderson, equal; Mackenzie, *Charters, Swanson, *Gunn; Holden and Meighen, equal.—(*Prizes*)—Wilson, Gibson.

RHETORIC AND ENGLISH LITERATURE.

THIRD YEAR.—*Class I.*—Martin, Hunter. *Class II.*—Day, Bryan, Evans, Howitt, Murray, Morison. *Class III.*—Pedley, Lindsay and Mason, equal; Bryson and Thurlow, equal; *VanHorne, Duke. (*Prize*)—Martin.

THIRD YEAR.—(*Additional Department in English and History.*) *Class I.*—Hunter, Martin. *Class II.*—Bryan.

MODERN HISTORY.

B.A. ORDINARY.—*Class I.*—Colby, Nicholson, Langton. *Class II.*—Cameron, Sanders, Gerrie, Bourne and Nicholls, equal; *Class III.*—Henderson, Whyte, Russell, Kingston.

B.A. *Additional Department in English and History.*—*Class I.*—Nicholson, Colby. *Class II.*—Nichols. *Class III.*—Bourne.

ENGLISH LITERATURE AND HISTORY.

SECOND YEAR.—*Class I.*—Squire, Gibson, *Morgan, Wilson and Deeks, equal. *Class II.*—Evans, Reid and *Scott, equal; Rogers and Stevenson, equal; Robertson, Holden and Lucas and Truell, equal. *Class III.*—Jamieson, McKenzie, Garth, Meighen, Swanson, Walsh, Henderson. (*Prize*)—Squire.

ENGLISH LITERATURE AND ANALYSIS.

FIRST YEAR.—*Class I.*—Daley and Williams, equal; Sutherland, Davidson (Peers Scott, Stayner, J. Botterell, Corcoran. *Class II.*—Abbott, Nicholls, McDougall, Vipond, Hunter, Elliott and Mack, equal; Kinghorn and Tolmie, equal; Pangman and I. Botterell and Hall (R. S.) and Morgan, equal; Davidson (C.), Colclough and Trenholme, equal; Tory and Macfarlane, equal; Hall, (A. R.) and Mathewson, equal. *Class III.*—Reed, McDuffee and Robertson and Walsh, equal; Fry, Mills and Paton, equal; Berwick, McGregor and Kennedy, equal; Ross, Ault and Quimby equal; Austin. (*Prizes*)—Daley and Williams.

MECHANICS AND HYDROSTATICS.

B. A. ORDINARY.—*Class I.*—Johnson (A. R.), Johnston R., Whyte. *Class II.*—Brown. *Class III.*—None.

THIRD YEAR.—*Class I.*—Giles, Ritchie, Hunter; Cross and Morison, equal; Le Rossignol. *Class II.*—Massé. *Class III.*—Naismith (P. L.); Evans and Simpson, equal; England, Duke, Palmer, Bryson, Sweeny, Murray.

Passed.—(*aegra.*)—Murphy.

ASTRONOMY AND OPTICS.

B.A. ORDINARY.—*Class I.*—Brown and Walsh, equal; Johnston (R.), MacArthur; Johnson and Kingston, equal. *Class II.*—None. *Class III.*—Nichols.

THIRD YEAR.—(*Additional Department.*)—*Class I.*—Ritchie.

EXPERIMENTAL PHYSICS.

B. A. ORDINARY.—*Class I.*—Johnson (A. R.), Johnston (R.), Brown, Nicholson. *Class II.*—McLennan (M.). Nichols, McLeod (M. J.). *Class III.*—Patton, Whyte.

B.A. ORDINARY.—(*Additional department*).—*Class I.*—Johnston. *Class II.*—McLeod (M. J.).

THIRD YEAR.—*Class I.*—Giles, Le Rossignol; Naismith and Ritchie, equal: Massé. *Class II.*—None. *Class III.*—Sweeny.

TRIGONOMETRY AND ALGEBRA.

SECOND YEAR.—*Class I.*—Wilson; Gibson and Squire, equal; Deeks. *Class II.*—Jamieson, Reid, Garth. *Class III.*—Holden and McCusker, equal; Meighen, Rogers, Stevenson; Henderson and Walsh, equal; Robertson, Truell.

FIRST YEAR.—*Class I.*—Tory, MacDougall, Daley, Robertson; Hall (A. R.) and Williams, equal; Abbott and Nicholls, equal; Corcoran, Sutherland, Hunter, Reed. *Class II.*—Scott, Kinghorn, Elliott and Hall (R. S.) and Mack, equal; Macfarlane. *Class III.*—Trenholme, Martell, Berwick, Davidson (P.) and Tolmie, equal; Dougall and Ross, equal; McDuffee, Botterell (J. T.) and Finch, equal; Davidson (C. F. M.), Hill, Cameron, Colclough, Paton, Fry, Walsh, Ault, Botterell (H. I).

GEOMETRY AND ARITHMETIC.

SECOND YEAR.—*Class I.*—Deeks and Gibson, equal; Jamieson (W. L.), Wilson. *Class II.*—McCusker; Holden and Stevenson, equal; Rogers and Truell, equal; Squire. *Class III.*—Garth, Robertson, Mackenzie; Reid and Walsh, equal; Henderson.

FIRST YEAR.—*Class I.*—Nicholls, Williams, Hall (A. R.), Tory, MacDougall and Robertson, equal; Daley, Corcoran, Hill. *Class II.*—Dougall, Mack, Sutherland, Berwick; Scott and Tolmie, equal; Abbott and Hall (R. S.) equal; Reed, Kinghorn. *Class III.*—Elliott; Botterell (H. I. R.) and Davidson (P.) equal; Fry and Hunter and Martell, equal; Cameron, Finch, Walsh, Botterell (J. T.) and Macfarlane, equal; Mathewson; Ross and Trenholme, equal; Paton, Davidson (C.), Quimby; Cushing and McDuffee, equal; Cowie and McGregor, equal; Dunlop, Colclough, Mills. *Honour Examinations in Mathematics and Natural Philosophy.*

B.A. EXAMINATION.—*First Rank Honours and Anne Molson Gold Medal:*—Johnson, Alexander R.

FIRST YEAR.—*First Rank Honours:*—Tory (*Prize*), McDougall (*Prize*).

FRENCH.

B.A. ORDINARY.—*Class I.*—MacArthur. *Class II.*—Solandt. *Class III.*—Patton,

B.A.—(*Aditional Department*)—.*Class I.*—Patton. *Class II.*—None. *Class III.* Solandt.

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THIRD YEAR.—*Class I.*—Day (*Prize*), Simpson, McFee, Bryson, Palmer, Evans, *McDonald, Massé. *Class II.*—*Baldwin, Howitt, Bryan, McPhail. *Class III.*—Mason, Duke.

THIRD YEAR.—(*Additional Department in French*). *Class I.*—Massé.

SECOND YEAR.—*Class I.*—Squire and Wilson equal (*Prizes*)—Stayner, Henderson Reid. *Class II.*—Morgan, Rogers, Truell. *Class III.*—Holden, Garth Jamieson, McKenzie, Walsh, Moore.

FIRST YEAR.—*Class I.*—Abbott, (*Prize*), Hausen, Corcoran, Williams, Nicholls. Davidson P., Reid; Claxton, L., and Mathewson, equal; McDougal and Robertson, equal; Cameron, Scott, Kinghorn, Colclough; Hall, Rl S., and Trenholme, equal; Botterell J., Elliott, Davidson C., Botterell H. J. *Class II.*—McDuffee and MacFarlane and Martell, equal; Day, Dunlop and Walsh, equal; Cowie and Rawlings, equal; Fry and Morgan, equal; Hall, Alex. R., Cushing and Mack and Tolmie, equal. *Class III.*—Ross, Paton, Mills, and Hunter.

GERMAN.

B.A. *Ordinary.*—*Class I.*—Patton.

B.A. *Additional.*—*Class I.*—Patton.

THIRD YEAR.—*First Division.*—*Class I.*—Ritchie (*Prize*); Martin (*Prize*); Cross, *Macfarlane (J.), *Johnson (H.), Palmer and *Van Horne, equal. *Class II.*—Murray, Murphy. *Second Division.*—*Class III.*—Naismith.

SECOND YEAR.—*Class I.*—Gibson (*Prize*) and Reid (*Prize*) and *Stayner equal; Meighen. *Class II.*—None. *Class III.*—Lucas.

FIRST YEAR.—*Class I.*—Daley (*Prize*); Williams (*Prize*); Dougall; Abbott and Botterell (J. T.), equal; Macfarlane (M.), Botterell (H. I. R.), Scott (S.). *Class II.*—Davidson, Ault.

HEBREW.

ADVANCED COURSE.—*Class I.*—Maclennan and Macallum, equal (*Prize*); Naismith. *Class II.*—Sanders, Langton, Clay, McLeod. *Class III.*—Russell, Whyte.

SYRIAC COURSE.—*Class I.*—Macallum, Maclennan, Sanders.

INTERMEDIATE COURSE.—*Class I.*—Deeks, (*Prize*), Giles, Campbell. *Class II.*—Swanson. *Class III.*—Robertson, Stevenson, Rochester, McCusker.

ELEMENTARY COURSE.—*Class I.*—Sutherland, (*Prize*) *Vessot, Tory. *Class II.*—McGregor. *Class III.*—McCaskill, Berwick, Finch, Hodges, Gunn.

The Neil Stewart Prize.—M. Maclennan.

GEOLOGY AND MINERALOGY.

B. A. ORDINARY.—*Class I.*—Walsh, MacArthur, Brown, Kingston. *Class II.*—Gerrie, Bourne, Solandt. *Class III.*—McLeod.

GEOLOGY ALONE.—*Class I.*—*Kerruish. *Class II.*—*Hunt, *Truax.

GEOLOGY.—(*Additional*)—*Class I.*—Kingston.

ZOOLOGY.

THIRD YEAR.—*Class I.*—Cross and Giles (equal); Ritchie, Campbell, Le Rossignol-Hunter, Murphy, *Kerruish, McCallum; McPhail and Naismith, equal-Day, Morrison, *Baldwin, Evans. *Class II.*—McFee, Palmer, Simpson, Murray and *Truax, equal; Sweeny; Lindsay and Pedley, equal. *Class III.*—Hunt.

HONOUR EXAMINATIONS IN NATURAL SCIENCE.

B.A. EXAMINATION.—*First Rank Honours and Logan Gold Medal.*—J. B. Walsh.

THIRD YEAR.—*First Rank Honours.*—Le Rossignol, Evans, Giles, Ritchie.—*Second Rank Honours.*—Campbell.

CHEMISTRY (*Theoretical and Practical.*)

THIRD YEAR.—(*Additional*)—*Class I.*—None. *Class II.*—LeRossignol, Ritchie.

BOTANY.

THIRD YEAR.—(*Additional.*)—*Class I.*—Giles, Campbell, McPhail, *Van Horne Simpson, *Darey.

SECOND YEAR.—*Class I.*—Wilson (*Prize*), Squire, Deeks, Stevenson, *Johnston; Kennedy and Reid, equal; *Caldwell, Evans; Garth and Gibson, equal; Henderson. *Class II.*—*Medd, *Wells. *Class III.*—Truell, Walsh; Holden and Jamieson, equal; Rogers, *Galley, Meighen; McCusker. Mackenzie and Robertson, equal; *Carpenter, Lucas and Moore, equal.

Collections of Plants.—*Van Horne, Simpson.

Prize for collection of Plants.—M. C. Simpson.

CHEMISTRY.

FIRST YEAR.—*Class I.*—Williams; Abbott and Scott, equal; Hausen; McDougall, and Tory, equal; Corcoran, Nicholls. *Class II.*—Stayner, Botterell (J. T.), Richardson, Berwick, and Daley, equal; Colclough, McGregor Mack, Macfarlane, Sutherland. *Class III.*—Martell, Kennedy; David, son and Tolmie, equal; Trenholme; Mathewson and Botterell (H. I. R.), equal; Cameron and Robertson, equal; Nesbitt, Archibald, Davidson, Hall (A. R.); Fry and McDuffee, equal; Ross, McCaskill, Ault; Hall (R. S.) and Reed, equal; Finch, Elliott, Hunter, Paton, Hodges, Cushing, Kinghorn, Walsh. (*Prizes.*)—Williams, McDougall and Tory.

PRACTICAL CHEMISTRY.

FIRST YEAR.—*Class I.*—Stayner, Kennedy, Archibald, Abbott. *Class II.*—Botterell (H. I.).

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SPECIAL COURSE FOR WOMEN (DONALDA ENDOWMENT.)

PRIZES AND STANDING.

THIRD YEAR.

RITCHIE, OCTAVIA G.—First Rank Honours in Natural Science, First Rank General Standing, Prize in German.

HUNTER, GEORGINA.—First Rank Honours in English Language, Literature and History; First Rank General Standing.

MCFEE, DONALDA.—First Rank Honours and Prize in Mental and Moral Philosophy.

EVANS, BLANCHE B.—First Rank Honours in Natural Science.

CROSS, ELIZA C.—Prize in Mental and Moral Philosophy, Prize in Zoology.

SIMPSON, MARY C.—Prize in Latin, Prize for best collection of plants.

PASSED THE SESSIONAL EXAMINATION OF THE THIRD YEAR.

Cross, Ritchie, Hunter, McFee, Simpson, Evans, Palmer, Murray, Murphy (*ægra*).

PASSED IN CERTAIN CLASSES AS PARTIAL OR OCCASIONAL STUDENTS.

Denoon, Johnson (H.), Kerry, Macfarlane, (J. J.), Darey, Macdonell.

SECOND YEAR.

WILSON, ALICE MAUDE —(Normal School, Montreal).—First Rank General Standing, Prize in Botany, Prize in Logic, Prize in French.

SQUIRE, MAUDE M.—(Queen's College, Kingston.)—First Rank General Standing Prize in French, Prize in English.

REID, HELEN R. Y.—Prize in German.

PASSED THE SESSIONAL EXAMINATIONS OF THE SECOND YEAR.

Wilson, Squire, Reed, Henderson.

PASSED IN CERTAIN CLASSES AS PARTIAL OR OCCASIONAL STUDENTS.

Kennedy, Morgan (E. M.), Stayner, Evans (M. N.), McBratney, Scott, A. G.

FIRST YEAR.

WILLIAMS, ANNIE.—(Girls' High School, Montreal.)—First Rank General Standing, Prize in Latin, Prize in Anct. History, Prize in German, Prize in English, Prize in Chemistry.

ABBOTT, MAUDE,—(Misses Symmers and Smith's School, Montreal.)—First Rank General standing, Prize in Latin, Prize in Greek, Prize in Anct. History, Prize in French.

SCOTT, SARA B.—(Girls' High School, Montreal.)—First Rank General Standing.

PASSED THE SESSIONAL EXAMINATIONS OF THE FIRST YEAR.

Williams, Abbott, Scott (S. B.), Botterell (J. T.), Macfarlane (M.), Botterell (H I.), Davidson (C. F.)

PASSED IN CERTAIN CLASSES AS PARTIAL OR OCCASIONAL STUDENTS.

Claxton (L. L.), Day (H. R.), Kennedy, Morgan (C. M.), Stayner, Archibald, Pangman, Vipond, Rawlings.

† The prizes in this department are from income of Hannah Willard Lyman Memorial Fund.

MORRIN COLLEGE.

B.A. Ordinary Examinations.

GREEK.—*Class I.*—Rivard.

LATIN.—*Class I.*—Laurie.

MECHANICS AND HYDROSTATICS.—*Class I.*—Laurie, Rivard.

MORAL PHILOSOPHY.—*Class II.*—Laurie. *Class III.*—Rivard.

FRENCH (*Ordinary.*)—*Class I.*—None. *Class II.* Laurie, Rivard. *Class III.*—None

FRENCH (*Additional.*)—*Class I.*—Laurie, Rivard. *Class III.*—None.

HISTORY.—*Class I.*—Laurie. *Class II.*—Rivard.

INTERMEDIATE EXAMINATION.

GREEK.—*Class I.*—Parker, Sloane, McLeod, Lamont. *Class II.*—Whitelaw and Smith, equal; Ferguson. *Class III.*—Robertson.

LATIN.—*Class I.*—Sloane; McLeod and Parker, equal. *Class II.*—Smith, Ferguson. *Class III.*—Whitelaw, Lamont, Robertson.

LATIN PROSE COMPOSITION.—*Class I.*—Parker and Sloane, equal; McLeod. *Class II.*—Smith, Lamont, Ferguson. *Class III.*—Whitelaw.

TRIGONOMETRY AND ALGEBRA.—*Class I.*—Sloane; Robertson and Whitelaw, equal; Lamont, Parker, Smith. *Class II.*—None. *Class III.*—MacLeod.

GEOMETRY AND ARITHMETIC.—*Class I.*—Sloane, MacLeod; Smith and Lamont equal. *Class II.*—Robertson and Whitelaw, equal. *Class III.*—Ferguson, Parker.

LOGIC.—*Class I.*—None. *Class II.*—MacLeod. *Class III.*—Sloane, Parker, Smith, Whitelaw, Lamont, Robertson.

ENGLISH LITERATURE AND HISTORY.—*Class I.*—None. *Class II.*—Whitelaw, Parker, Sloane. *Class III.*—Lamont and Smith, equal; MacLeod, Robertson, Ferguson.

FRENCH.—*Class I.*—Sloane, McLeod. *Class II.*—Lamont. *Class III.*—Ferguson.

HEBREW.—*Class I.*—Robertson A., Smith, Whitelaw. *Class II.*—Parker.

ST. FRANCIS COLLEGE.

INTERMEDIATE EXAMINATION.

GREEK.—*Class I.*—Read. *Class II.*—Jones. *Class III.*—Parker.
LATIN.—*Class I.*—Jones. *Class II.*—None. *Class III.*—Read, Parker.
TRIGONOMETRY AND ALGEBRA.—*Class II.*—Parker, Jones. *Class III.*—Read.
GEOMETRY AND ARITHMETIC.—*Class II.*—Parker. *Class III.*—Read.
LOGIC.—*Class I.*—None. *Class II.*—None. *Class III.*—Read, Parker.
ENGLISH LITERATURE AND HISTORY.—*Class III.*—Read, Parker.
FRENCH.—*Class I.*—Parker. *Class II.*—Read, Jones.

FACULTY OF APPLIED SCIENCE.

GRADUATING CLASS.

WILLIAM ARTHUR CARLYLE.—British Association Gold Medal; Certificates of merit in Materials, Designing, Metallurgy, and First Rank Honours in Natural Science.

ROBERT EDWARD PALMER.—British Association Exhibition; Certificates of merit, in Theory of Structures, Designing, Steam and Materials.

WALTER FREDERICK FERRIER.—First Rank Honours in Natural Science.

$25 Prize for Summer Report; Certificate of merit in Designing.

RAOUL RINFRET.—Certificate of merit in Practical Astronomy and Geodesy.

THIRD YEAR.

EDGAR SYDNEY M. LOVELACE.—Prizes in Mathematics, Mathematical Physics and Surveying.

MARK WILLARD HOPKINS.—Prize in Mathematics.

ARTHUR LENOX DRUMMOND.—Prizes in Theory of Structures, Dynamics and Geometry of Machinery, Descriptive Geometry, Practical Construction and Materials. $25 prize for Summer Report.

ROBERT FORREST OGILVY.—Prizes in Mechanical Work and Descriptive Geometry.

CHARLES GREEN.—Prize in Geology.

CHARLES HERBERT MACNUTT.—Prizes in Experimental Physics and Mining.

PASSED THE SESSIONAL EXAMINATIONS.

Civil Engineering (*Advanced Course.*)

IN ORDER OF MERIT.

Edgar Sydney M. Lovelace, Mark Willard Hopkins.

Civil Engineering (*Ordinary Course.*)

Alfred Joseph Tremblay.

Mechanical Engineering (*Advanced Course.*)

Arthur Lenox Drummond.

Mechanical Engineering (*Ordinary Course.*)

IN ORDER OF MERIT.

Robert Forrest Ogilvy, Arthur Edward Childs, Aubrey George Eneas.

Mining Engineering (*Ordinary Course.*)

IN ORDER OF MERIT.

Charles Herbert Macnutt, Charles Green, Francois Xavier A. Roy.

Practical Chemistry (*Ordinary Course.*)

IN ORDER OF MERIT.

William Joseph Hamilton, Charles Lauglin Walters.

SECOND YEAR.

RICHARD LEA.—Prizes in Mathematics, Mathematical Physics, Zoology, Experimental Physics and Materials.

GEORGE MORSE EDWARDS.—Burland Prize in Chemistry ($25); Prizes in Chemistry, Botany and German.

PASSED THE SESSIONAL EXAMINATIONS.

Civil Engineering.

IN ORDER OF MERIT.

Richard Lea, Murdy John McLennan, Malcolm C. McFarlane, Peter Lawrence Naismith, John Holden Antliff, Joseph Tetû Bertrand, George Kyle Addie.

Mechanical Engineering.

James Preston Tuplin.

Practical Chemistry.

IN ORDER OF MERIT.

George Morse Edwards, Milton N. Hersey, Andrew Young.

FIRST YEAR.

PERCY NORTON EVANS—Prizes in Chemistry and German.

EDWARD ERNEST STUART MATTICE.—Prizes in English, French and Mathematics.

PASSED THE SESSIONAL EXAMINATIONS.

IN ORDER OF MERIT.

Percy Norton Evans, Edward Ernest Stuart Mattice, George W. Mooney, Henry Robert Jamieson, Albert Howard Hawkins, Chester Bowditch Reed, Peter Whiteford Redpath, William Smaill, William Monk, Miles Lawrence Williams.

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FOURTH YEAR.—*Class I.*—Ferrier (*Prize*) (*Rockland Slate Quarrying*), Palmer (*Baie des Chaleurs Ry.*), Carlyle (*Field Work on Western O. P. Ry.*), Ball (*Sub-aqueous Tunnelling at Northumberland Strt.*) *Class II.*—Forneret (*Reservoirs*), Rinfret (*Bridges*), Taylor (*Straightening of Section of Central Vt. Ry.*) *Class III.*—McCarthy (*Horizontal Steam Engine*).

THIRD YEAR.—*Class I.*—Drummond (*Prize*) (*Indicators and Indicator Diagrams*); Carmichael (*Loco. Framework*) and Ogilvy (*Loco. Boiler*) and May (*Slide-Valve*), equal; Childs (*Locomotives*) and Lovelace (*Levelling*), equal. *Class II.*—Eneas (*Loco. Fuel consumption*) and Macnutt (*Timbering of Mines*) and Roy (*Réproduction artificielle d'espèces minerales*), equal; Green (*Rideau Mining District*), Hamilton (*Explosive compounds*); Hopkins (Roads) and Tremblay (*Crane Island Pier*), and Walters (*Uses and manipulation of Sulphuric Acid*), equal.

SECOND YEAR.—*Class I.*—McKenzie (*Rope Transmission of Power*), McFarlane (*Engineering*). *Class II.*—Bertrand (*Pier at Farther Point*); Hersey (*Barometer*), and McLennan (*Surveying Instruments*) and Young (*Woollen manufacture*), equal.

SESSIONAL EXAMINATION 1887.

FREEHAND DRAWING.

FIRST YEAR.—*Class I.* -Evans. *Class II.*—Ramsay, Mooney, Ellacot, Reid, Mattice. *Class III.*—Williams, Jameson, Monk, Murray, Hawkins, Smaill, Reekie, Redpath, Goulet.

DESCRIPTIVE GEOMETRY.

THIRD YEAR.—(*Civil and Mechanical Courses*).—*Class I.*—Ogilvy (*Prize*) and Drummond (*Prize*), equal; Childs and Hopkins, equal. *Class II.*—Lovelace. *Class III.*—Eneas, Tremblay. (*Mining Course.*)—*Class II.*—Green. *Class III.*—Macnutt, Roy.

SECOND YEAR.—*Class I.*—None. *Class II.*—Tuplin, McLennan, Antliff, Lea. *Class III.*—McFarlane; Young; Addie, Bertrand and Hunter, equal; Edwards, Hersey, Naismith.

SURVEYING AND GEODESY.

THIRD YEAR.—*Class I.*—Lovelace, (*Prize*), Hopkins. *Class II.*—Tremblay.

SECOND YEAR.—*Class I.*—None. *Class II.*—McFarlane, Lea, McLennan, Tuplin, Naismith, Addie. *Class III.*—Antliff and Bertrand, equal; Hunter.

GEODESY AND PRACTICAL ASTRONOMY.

FOURTH YEAR.—*Class I.*—Rinfret.

MATERIALS.

FOURTH YEAR.—*Class I.*—Palmer (*Certificate of Merit*), Carlyle (*Certificate of Merit*), Ferrier. *Class II.*—Forneret, Taylor, Ball, Rinfret. *Class III.*—McCarthy.

THIRD YEAR.—*Class I.*—Drummond (*Prize*), Lovelace; Hopkins and Macnutt, equal; Ogilvy. *Class II.*—Childs, Eneas. *Class III.*—Green, Carmichael, Tremblay, Roy.

SECOND YEAR.—*Class I.*—Lea (*Prize*), Tuplin. *Class II.*—Naismith, Hunter Addie. *Class III.*—McLennan, McFarlane, Bertrand, Antliff.

GEOMETRY OF MACHINERY.

THIRD YEAR.—*Class I.*—Drummond (*Prize*), Ogilvy. *Class II.*—Childs. *Class III.*—Eneas.

SECOND YEAR.—*Class I.*—None. *Class II.*—Tuplin, Lea; Naismith and McLennan, equal; Hunter. *Class III.*—McFarlane, Antliff, Addie, Bertrand.

MECHANICAL WORK.

SECOND AND THIRD YEARS.—*Class I.*—Ogilvy, (*Prize*). *Class II.*—Drummond, Childs, Tuplin. *Class III.*—Eneas.

PRACTICAL CONSTRUCTION.

(*Engines, Boilers and Cranes.*)

THIRD YEAR.—*Class I.*—Drummond (*Prize*), Ogilvy, Childs. *Class II.*—Eneas. *Class III.*—Carmichael.

SECOND YEAR.—*Class I.*—Tuplin.

DYNAMICS OF MACHINERY.

THIRD YEAR.—*Class I.*—Drummond (*Prize*), Childs, Ogilvy. *Class II.*—None. *Class III.*—Eneas.

THEORY OF STRUCTURES (*Advanced*).

THIRD YEAR.—*Class I.*—Drummond and Lovelace, equal; Hopkins.

THEORY OF STRUCTURES (*Ordinary.*)

FOURTH YEAR.—*Class I.*—Palmer (*Certificate of Merit*). *Class II.*—Forneret. *Class III.*—Taylor, Rinfret, McCarthy, Ball.

THIRD YEAR.—*Class I.*—Drummond (*Prize*), and Hopkins (*Prize*), equal; Lovelace, Ogilvy. *Class II.*—Childs; Macnutt and Tremblay, equal; Green. *Class III.*—Eneas, Roy.

DESIGNS, ESTIMATES, ETC.

FOURTH YEAR.—*Class I.*—Palmer and Ferrier and Carlyle, equal. *Class II.*—Forneret; Ball and Taylor, equal. *Class III.*—Rinfret, McCarthy.

HYDRAULICS.

FOURTH YEAR.—*Class I.*—None. *Class II.*—Palmer, Carlyle. *Class III.*—McCarthy, Forneret, Ferrier, Ball, Taylor.

HEAT AND HEAT ENGINES.

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GEOLOGY AND MINERALOGY.

THIRD YEAR.—*Class I.*—Green (*Prize*), Hopkins, Macnutt, Lovelace. *Class II.* None. *Class III.*—Roy, Tremblay.

ZOOLOGY.

SECOND YEAR.—*Class I.*—Lea, (*Prize*), McLennan, Bertrand, Naismith, Walters. *Class II.*—Addie, Antliff. *Class III.*—McFarlane, Hunter.

BOTANY.

SECOND AND THIRD YEARS.—*Class I.*—Edwards, Hersey. *Class II.*—Hamilton, Young.

GEOLOGY AND MINERALOGY (*Advanced*).

FOURTH YEAR.—(*Mining Course*).—*Class I.*—Ferrier, Carlyle.

MINERALOGY (*Advanced*).

THIRD YEAR.—(*Chemistry and Mining Courses*).—*Class I.*—Macnutt, Green. *Class II.*—Hamilton, Walters. *Class III.*—Roy.

PRACTICAL CHEMISTRY.

THIRD YEAR.—(*Chemistry Course*).—*Class I.*—None. *Class II.*—Hamilton, Walters.

THIRD YEAR.—(*Mining Course.*)—*Class I.*—Macnutt. *Class II.*—Green. *Class III.*—Roy.

SECOND YEAR.—(*Chemistry Course*).—*Class I.*—Edwards (*Prize*). *Class II.*—Hersey. *Class III.*—Young.

THEORETICAL CHEMISTRY.

THIRD YEAR.—(*Chemistry Course*).—*Class I.*—Hamilton and Walters, equal.

SECOND YEAR.—(*Chemistry Course*).—*Class I.*—Edwards. *Class II.*—Young *Class III.*—Hersey.

GENERAL AND PRACTICAL CHEMISTRY.

FIRST YEAR.—*Class I.*—Evans (*Prize*), Mattice and Mooney, equal. *Class II.*—Smaill, Jamieson, Hawkins, Monk, Ellacott, Reed, Redpath. *Class III.*—Williams.

GENERAL CHEMISTRY.—(*First Year Lectures.*)

SECOND YEAR.—*Class I.*—None. *Class II.*—Lea, Hunter. *Class III.*—Addie.

ASSAYING.

FOURTH YEAR.—(*Advanced*)—*Class I.*—Carlyle. (*Ordinary*).—*Class I.*—Ferrier.

METALLURGY.

FOURTH YEAR.—(*Advanced*)—*Class I.*—Carlyle. (*Ordinary*).—Ferrier.

ORE DEPOSITS (*Advanced*).

FOURTH YEAR.—*Class I.*—Carlyle.

MINING.

THIRD YEAR.—*Class I.*—Macnutt (*Prize*). *Class II.*—Green. *Class III.*—Roy.

ESSAY.

FOURTH YEAR.—*Flow through mouthpieces.—Class I.*—None. *Class II.*—None. *Class III.*—Ball.

Base-line Measurement.—Class I.—Palmer and Rinfret, equal.

Slide-Valve.—Class I.—None. *Class II.*—Forneret and Taylor, equal.

Retaining Walls.—Class I.—None. *Class II.*—McCarthy.

Bog and Lake Iron Ores.—Class I.—Carlyle.

THIRD YEAR.—*Destructive Distillation of Wood.—Class I.*—Hamilton, Walters.

Brakes.—Class I.—None. *Class II.*—Green.

Wohler's Laws.—Class I.—Lovelace, Hopkins, Tremblay.

Ventilation of Mines.—Class I.—Roy, Macnutt, Green.

Rivetted Joints.—Class I.—Drummond and Ogilvy, equal. *Class II.*—Carmichael, Childs.

SECOND YEAR.—*Basic Manufacture of Steel.—Class I.*—Lea. *Class II.*—Hunter Bertrand and McLennan, equal.

Toothed Gearing.—Class I.—None. *Class II.*—Addie and Antliff and McFarlane and Naismith, equal.

Rivetted Joints.—Class I.—None. *Class II.*—Tuplin.

Manufacture, Uses and Valuation of Bleaching Powder.—Class I.—Edwards, Hersey, Young.

MATHEMATICS.

FOURTH YEAR.—(*Advanced Astronomy*).—*Class I.*—Rinfret. (*Certificate of Merit.*

THIRD YEAR.—*Class I.*—Lovelace (*Prize*). *Class II.*—Hopkins. *Class III.*—Tremblay.

THIRD YEAR (*Advanced*).—*Class I.*—Hopkins (*Prize*), Lovelace (*Prize*). *Class II.*—Drummond.

SECOND YEAR.—*Class I.*—Lea (*Prize*). *Class II.*—Tuplin, Antliff, McLennan, McFarlane, Naismith. *Class III.*—Bertrand.

FIRST YEAR.—*Class I.*—Mattice (*Prize*), Evans. *Class II.*—Mooney, Hawkins, Jamieson; Ellacott and Redpath, equal; Monk. *Class III.*—Reed, Williams, Smaill.

MATHEMATICAL PHYSICS.

THIRD YEAR.—*Class I.*—Lovelace (*Prize*), Childs, Ogilvy, Drummond, Hopkins. *Class II.*—Green. *Class III.*—Tremblay, Macnutt, Eneas.

SECOND YEAR.—*Class I.*—Lea (*Prize*); McFarlane and Tuplin, equal; Hersey. *Class II.*—Naismith, McLennan, Young, Edwards. *Class III.*—Bertrand, Addie, Antliff.

EXPERIMENTAL PHYSICS (*Electricity, Magnetism and Sound*).

THIRD YEAR.—*Class I.*—Macnutt, (*Prize*); Ogilvy. *Class II.*—Lovelace, Walters. *Class III.*—Carmichael; Childs and Tremblay, equal; Drummond, Hopkins, Green, Hamilton.

SECOND YEAR.—*Class I.*—Lea, (*Prize*); Naismith, Hersey, Edwards, Young, Tuplin. *Class II.*—None. *Class III.*—McLennan; Bertrand and McFarlane equal; Antliff, Hunter, Addie.

METEOROLOGY.

Class I.—None. *Class II.*—Ball.

ENGLISH.

THIRD YEAR.—*Class I.*—Childs. *Class II.*—Walters, Macnutt, Ogilvy. *Class III.*—Eneas and Hamilton, equal; Tremblay.

SECOND YEAR.—*Class I.*—None. *Class II.*—Addie and McFarlane, equal; Bertrand and Lea, equal; Hersey and Tuplin, equal; Hunter. *Class III.* Antliff, McLennan; Edwards and Young, equal.

FOURTH YEAR.—*Class I.*—Mattice (*Prize*); Evans. *Class II.*—Reed, Jamieson. *Class III.*—Hawkins, Mooney, Small, Redpath.

FRENCH.

FIRST YEAR.—*Class I.*—Mattice (*Prize*), Mooney. *Class II.*—None. *Class III.*—Williams, Redpath.

SECOND YEAR.—*Class I.*—Tuplin. *Class II.*—Addie, McFarlane. *Class III.*—Hunter.

THIRD YEAR.—*Class I.*—None. *Class II.*—Green. *Class III.*—Lovelace Drummond.

GERMAN.

FOURTH YEAR.—*Class III.*—Ball.

THIRD YEAR.—*Class III.*—Childs, Eneas, Macnutt.

SECOND YEAR.—*First Division.—Class I.*—Edwards (*Prize*). *Class II.*—Hersey. *Class III.*—Young, McLennan, Hamilton.

Second Division.—Class I.—Lea. *Class II.*—None. *Class III.*—Naismith, Antliff.

FIRST YEAR.—*Class I.*—Evans, Mooney. *Class II.*—Monk, Jamieson, Reed. *Class III.*—Smaill, Hawkins.

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*Deceased.

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*Arnoldi. Daniel (Hon.), 1847
Arthur, R. H., C.P.R.R. 1885
Atkinson, Robert, 1862
Ault, Alexander, Ochkosh, Wis 1860
Ault, Charles, Montreal 1855
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Ault, Edwin D., Aultsville, O 1868
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Ayer, N., M.A., Sackville, N.B 1880
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Baird, T. A. D., Bay City Mich 1885
Baker, Albert, Dawlish, Devon 1848
Barclay, George, Parkhill, O 1870
*Barnston, James [ad eun] 1856
Barrett, Jos. A., Fenaghvale, O 1884
Battersby, Charles, Port Dover, O 1861
Baynes, Donald, M. A., London, Eng 1876
Baynes, George Aylmer, London, Eng 1869
Beatty, D., Richmond, Carlt. Co., O 1862
*Beaudette, Alfred, 1865
Beaudry, Louis B., St. Cesaire, Q 1871
Beckstead, M., Lisbon Centre, St. Law. Co., NY 1878
†Bell, James, Montreal 1877
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Bell, Robert, C. E., Ottawa 1878
Bell, Robert W., Peterboro, O 1873
Belleau, Alfred, Quebec 1862
*Bergeron, Joseph, 1870
Bergin, Darby, Cornwall, O 1847
Berry, J. A., Seeley's Bay, O 1887
Bessey, William E., Toronto, O 1863
Bender, Prosper, Boston, Mass 1865
Benson, Joseph B., Chatham, N.B 1875
*Bibaud, Jean G., 1843
†Birkett, H. S., Montreal 1886
Blackader, Alex. D., B.A. Montreal 1871
Blackader, E. H. P., B A., Montreal 1887
Blacklock, John J., Chesterville, O 1851
*Blanchet, J. B., 1863
Blair, Robert C., Three Rivers, Q 1865
*Bligh John W., 1865
Bogart, Irvine D., Mene, O 1859
Boggs, G. W., Wolfville, N S 1886
*Bomberry, Geo.E., 1875
Bonesteel, S. A., Columbus, Neb 1881
Boone, S. W., B. A., Fredericton, N B 1887
Boulter, George H., Stirling, O 1852
Bowen W., B. A., Quebec, Q 1887
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*Boyer, Louis, 1842
*Boylan, Andrew A., 1857
Boyle, Albert D., Carbonear, Nfld 1877
*Bowman, William E., 1860
Bower, Silas J., Waddington, N Y 1865
*Bradley, William, 1869
*Braithwaite, Francis H., 1863
Brandon, John, Ancaster, O 1867
Breslin, William I., 46th Regiment 1847
Brigham, Josiah S., Phillipsburg, Q 1848
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*Bristol, Amos S., 1850
Brodeur. Alphonse, Roxton Falls, Q 1863
Brodie, John, Honolulu, Sdwh Isl 1877
Brooks, Samuel T. St Johnsbury, Vt 1851
*Brouse, William H., 184
Brouse, Jacob E., Brockville, O 1861

Brossard, J. B. J., Laprairie, Q 1875
Brown, Thomas L., Melbourne, Q 1881
Brown, J. L., Plattsville, O 1879
Brown, Peter E., Ste Anne de Bellevue, Q 1863
Brown, Harry, 405 W. Washington St, Chicago 1873
Brown, Chs. O., Brome, Q 1882
Browne, Arthur A., B.A., Montreal 1872
Bruneau, Adolphe, Sorel, Q 1853
*Bruneau, Olivier T. (Hon), 1843
*Bruneau, Onesime, 1851
Bryson, William G., Fenelon Falls, O 1867
Bucke, Richard Maurice, London, O 1862
*Bucke, Edward H., 1852
*Buckle, John M. C., 1869
Buckley, William P., Prescott, O 1870
Bull, George J., New York 1869
*Bullen, Charles F., 1864
Buller, Frank, Montreal 1879
Burgess, J. A., Listowel, O 1868
Burch, B. F. Walla Walla, Walsh Ter 1866
*Burland, John H., 1863
Burland, Samuel C., Chester, Penn 1877
Burland, William B., Montreal 1872
Burland, William H., Wilshton, Fla 1875
Burland, Benj. W., Mineville, N Y 1882
Burrows, F. N., Montreal 1885
Burrows, Philip P., Lindsay, O 1866
*Burnham, Robert Wilkins, 1869
*Burns, Alfred J., 1854
Burritt, Horatio C. Toronto, O 1863
Burwash, Hy. J., Milw Ave., Chicago 1879
*Butler, George C., 1865
Buttler, Billa F., Stirling, O 1879
*Buxton, John N., 1849
Cahalan, James, Wyandotte, Mich 1880
†Cameron, Chas. E., Montreal 1883
Cameron, D. A., Strathroy, O 1885
Cameron, Paul, Alexandria, O 1881
Cameron, Duncan H., Portland, Ore 1877
Cameron, James C., Montreal 1874
Cameron, John D., Norway, Mich 1878
Cameron, K., Montreal, Q 1887
*Campbell, Donald Peter, 1860
Campbell, Francis Wayland, Montreal 1860
*Campbell, G. W., M.A., (ad eun) 1843
Campbell, J., New Zealand 1876
*Campbell, Samuel, 1866
Campbell, John, Seaforth, O 1869
Campbell, Lorne, London, Eng 1882
Campbell, A. W., Montreal 1886
Cannon, Gilbert, Almonte, O 1877
Carmichael, D. A., Mar. Hosp. Serv. Cairo, Ill 1873
Carey, Augur, D. L. (ad eun). 1864
Carman, Philip E., Detroit, Mich 1879
Cassidy, David M., Med. Supt County Asylum, Lancaster, Eng 1867
Cassidy, Geo. A, Goldstone, O 1885
Cassidy, John F., Goderich, O 1865
*Carroll, Robert W. W., 1859
Carruthers, Geo., North Bedeque, P.E.I. 1883
Carson, J. H., Lake Park, Minn 1881
*Carson, Augustus, 1843
Carter, Samuel A., Meadow Vale, O 1859
Case, W. Hermanus, Hamilton, O 1879
Casgrain, Charles E., Windsor, O 1851
Cattanach, Andrew J., Denver, Col 1871
Cattanach, Angus M., Dalhousie Mills, O 1882
Cattanach, W. S., Glen Water, O 1886
Chagnon, Vincelaus G. B., Fall River, Mass 1861
*Chaliner, Francis, 1849
Cherry, William, Toledo, Ohio 1869
*Chesley, George Ashbold, 1862
Chevalier, Gustave, Bedford Q 1860
Chevalier, Napoleon E., Iberville, Q 1873
Chipman, C. J. H., B.A., Ottawa, O 1868
*Chisholm, Alex., Alexandria, O 1878
Chisholm, Murdoch, Bay Roberts, Nfld 1879
Christie, George H., Lachute, Q 1872
Christie, John B., Palaluma, Son Co., Cal 1865
Christie, Thomas, Lachute, Q 1848
Christie, John H., B.A., 833 W. 22nd St., Chicago 1875
Christie, Edmund, Chicago 1882
Christie, William, B.A., Lachute, Q 1887
*Church, Charles H., 1862
Church, Clarence R., Ottawa 1868
Church, Coller M., Aylmer, Q 1855
Church, F. W., Aylmer, Q 1880
Church, Levi R., Montreal 1857
Church, Mills K., Merrickville, O 1864
*Church, Peter H., 1846
Clarke, Hy. J., Winnipeg, Man 1881
Clarke, Octavius H. E., Cohoes, N Y 1870
Clarke, Wallace, B.A., Utica, N Y 1871
Clarke, Henry J., Pembina, Dakota 1884
Clarke, Richard A., Essex Co., O 1870
Clarke, F. G. B., Fordwych Rd, Kilburn, London, Eng 1876
Clarke, J. L., Waterloo, Q 1886
Clemesha, John W., Port Hope, O 1867
Clement, Victor A., St. Guillaume, Q 1866
*†Cline, John D., B.A., 1874
Cluness. Daniel, Nanaimo, B C 1870
Codd, Alfred, Winnipeg, Man 1865
*Collins, Charles W., 1869
Collison, R., Norfolk, St Law. Co., N Y 1877
Colquhoun, George, Iroquois, O 1876
Comeau, John B., St David, Q 1870
Cook, Guy R., B.A., Louisville, N Y 1876
Cook, Hermon L., Napanee, O 1854
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Cooke, Sydney P., Hull, Q 1869
Cooke, W. H., Wolfston, Q 1876
Copeland, Wm. L., 719W Wash'n Chicago 1872
*Corbett, A. P. M., 1854
Corbett, William H., Brig. Surg Army Med Dept 1854
Corlis, Josiah, St. Thomas, O 1869
Cormack, Wm., Morristown, O 1881
*Corson, John, 1869
Corson, Douglas, Woodstock, O 1885
Cotton, C. L., Cowansville, Q 1877
Cousins, W. C., Ottawa, O 1882
Cowie, A. M., Montreal, Q 1887
*Cowley, Thomas McJ., 1870
Cowley, D. K., Granby, Q 1880
Cox, Frank, Charlottetown, P E I 1869
Coyle, Henry W., Sorel, Q 1876
Craig, Thornton, Capay, Cal 1876
Craig, M. A., Gleuwater, O 1886
Craik, Robert, Montreal 1854
Cram, Daniel C., Lawrence, Kan 1872
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Crocket, W. C., B.A., Fredericton, N B 1886

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Daly, Walter S., Ogdensburg, U S 1885
*Dansereau, Charles, 1842
Dansereau, Charles, 1869
*Dansereau, Pierre, 1835
Davey, J. H., Philadelphia 1866
Davey, J. H., Philadelphia 1866
Davis, Thomas B., Chelsea, Q 1884
Davignon, F. F., Leadville, Col 1877
Dawson, R., B.A., Montreal 1882
Daze, Henri, Montreal 1885
Deardon, G. A., Victoria, B C 1882
*Dease, Peter Warren, 1847
DeBonald, C. S., Berthier en haut, Q 1862
DeBoucherville, Charles B., Quebec 1843
DeCow, D. McG , Montreal 1866
DeGrosbois, T. B , Roxton Falls, Q 1868
Demorest. B. G. G., Stirling, O 1852
Derby, W. J., Rockland, O 1862
*Desaulniers, Antoine A , 1863
*Decelles, Charles D., 1841
Dibblee, G. O., Moor's Mills, N B 1880
*Dice, George, 1864
*Dick, James R., 1842
*Dickinson, James S., 1846
*Dickinson, George, 1868
Dickson, William W., Pembroke, O 1863
Dickson, J. A., Trenholme, Q 1887
Digby, F. Winniett, Brantford, O 1865
*Dodd, John, 1864
Doherty, W. W., Kingston, N B 1885
Donnelly, C. H., Waresville, Texas 1860
*Dorion, Severe, 1843
*Dorland, Enoch G., 1850
Dorland, James, Milwaukee, Wis 1875
Dougan, Wm., St. Catharines, O 1867
Douglass, James (Hon.) 1847
Dowling, John F., Egansville, O 1875
Drake, Joseph M., Abbotsford, Q 1861
Dubuc, Charlemagne, Montreal 1864
*Ducket, Stephen, 1853
Duckett, William A., Montreal 1659
Dufort, Thadee A., St Sebastien, Q 1865
Duhamel, Louis, Hull, Q 1860
Duncan, George, Fareham, Hants, Eng 1866
Duncan, Gedeon M., Bathurst, N B 1871
Duncan, George C., London, Eng 1875
Duncan, James S., Surg. Maj. Army 1858
*Duncan, John, 1671
Duncan, John A., Moose Jaw, N W T 1884
Duncan, W. T., Fergus Falls, Minn 1882
Dunlop, H. A., Crookston, Minn 1882
*Dunn, William Oscar, 1843
Dunsmore, John M., Stratford, O 1870
Dupuis, Joseph B., Clarenceville, Q 1856
Easton, John, Brockville, O 1852
Easton, C. L., Easton's Corners, O 1887
Eberle, Harry A., Kansas City, Mo 1876
Eberts, D. W., Winnipeg 1885
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Edward, Eliphalet G , London, O 1855
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Elder, John, B. A., Huntingdon, Q 1885
Elderkin, Edwin J., Avondale
Hants Co., N S 1884
Eklington, A. G., Sur. Maj. Gren. Guards 1862

Ellis, W. E., St Catharines, O 1887
Ellison, S. R., 268 W 43rd St., N Y 1873
Emery, Gordon J., Minneapolis, Minn 1857
*English, T. F., 1858
*Erskine, John, 1860
Ethier, Calixte, St. Eugene, Q 1867
Evans, Griffith, Vet. Dept. Army
Woolwich, Eng 1864
Evans, E. J., Seaforth, Q 1887
Ewing, Wm., Hawkesbury, O 1873
Falkner, Alex., Lancaster, O 1866
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Farewell, W G., Oshawa, O 1868
Farley, James T., Fremont Centre, Mich 1877
Farley, John J., Belleville, O 1873
Faulkner, George W., Stirling, O 1871
Faulkner, D. W , Foxboro, O 1878
Feader, H. C., Chicago, Ill 1881
Feilde, E. C., Prescott, O 1881
Fenwick, Geo. E., Montreal 1847
Ferguson, Alex. R., Dalhousie Mills, O 1866
Ferguson, Wm. A., B.A., 1884
Fillmore, E. W., Baie Verte, N B 1887
Finlay, F. G., Montreal 1885
*Finlayson, John, 1834
Finnie, John T., Montreal 1869
*Fisher, John, 1847
*Fitzgerald, James, 1865
Flagg, J. D., Morrisburg, O 1887
Fortier, Louis M., Huntingdon, Q 1873
*Forster, Stephen Sewell, 1846
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Fraser, H. D., Perth, O 1881
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*Fraser, William, 1836
Fraser, William H., Liverpool, N S 1867
Fraser, Donald M., Stratford, O 1869
Fraser, Donald, Chicago, Ill 1868
Fraser, J. R., Metcalfe, O 1878
Fraser, J. M., Hawkesbury, O 1887
Freeman, C. M., Cape Sable Isl , N S 1871
Fuller, W., Grand Rapids, Mich 1866
Fuller, H. LeRoy, B.A., Sweetsburg, Q 1870
Fulton James H., Montreal 1863
Gale Hugh, Bay City, Mich 1882
*Garvey, Joseph, 1852
Gardner, H. H., San Francisco, Cal 1878
Gardner, John J., Montreal 1883
Gardner, Matthew, Sacramento, Cal 1871
Gardner, Wm., Montreal 1867
Gardner, A. W., Cornwall. O 1887
Gairdner, T. M., Bayfield, O 1886
*Gascoigne, Geo. E., 1861
Gaviller, Edwin A., Hamilton, O 1873
*Gauvreau, Elzear, 1855
*Gauvreau, Lewis H., 1836
Gendron, Thomas St. Raymond, Q 1866
Gernon, George W., Marieville, Q 1872
*Gibb, George D., 1846
Gibson, John B., Cowansville, Q 1855
Gibson, W. B., Burlington, Vt 1878
*Gibson, Edward B., 1864
Gibson, J. B., Cowansville, Q 1886
Gilbert, Henry L., Sherbrooke, Q 1875
Gillis, John A. F., Summerside, P E I 1877
Gillies, John, Teeswater, O 1867
Gilmour, Angus A., Modesca, Cal 1868
*Giroux, Philippe, 1859
Girdwood, Gilbert P., Montreal 1869
Gadman, G. J., Lindsay, O 1886

Glen, C. W. E., Chambly, Q 1858
Godfrey, Robert, Montreal 1844
Godfrey, Abraham C., Freemantle, Southampton, Eng 1865
*Goodhue, P. J., 1875
Godforth, Franklin, Runcorn, Chester, Eng 1863
Gooding, Chs. E., St. Philip, Barbadoes, W I 1884
Gordon, C. M. Aylwin, O 1881
Gordon, Robert, Arlington, Ill 1868
*Gordon, W. W., 1863
Graham, Charles E., Hull, Q 1865
Graham George A., 1884
*Graham, Henry, 1863
Graham, Kenneth D., Ottawa 1875
Graham, J., Carp, O 1886
Grant, Donald J., Woodbridge, O 1863
Grant, James A., Ottawa 1854
Grant, Jas. A., jun., B.A., Ottawa, 1882
Grant, Wm., Perth, O 1867
Grant, J. H. Y., Ottawa 1886
Gray, John S., Winnipeg, Man 1876
Gray, Thomas, Paisley, O 1879
Gray, James, 1883
Gray, W. L., Pembroke, O 1881
Greaves, Henry C., Barbadoes 1877
Greenwood, F. S., St. Catharines, O 1878
Greer, T. A., C.SS. Minia, Halifax, N S 1876
*Grenier, L. P. A., 1863
Groves George H., Carp, O 1879
Groves, W., Carp, O 1886
Guerin, James J. E., Montreal, 1878
Guest, Thomas F., St. Mary's, O 1873
Gunn, James, Durham, Gray Co. O 1861
Gurd, David F., Montreal 1879
Gustin, Smith, Bay City, Mich 1885
Gustin, Wm. Claud, Detroit, Mich 1863
Hagarty, Dad. M. J., Portage la Prairie Manitoba, 1866
*Hall, Archibald, (ad eun) 1848
*Hall, James B., 1866
*Hall, J. W. 1848
Hall, A. G., Franklin, Q 1887
Hall W., Walkerton, O 1887
Hallett, E. O., Truro, N S 1885
Halliday, James T., Peterboro, O 1865
*Hamilton, Andrew W., 1859
Hamilton, Charles S., Demorestville, O 1868
Hamilton, John R., Stratford, O 1871
*Hamilton, Rufus F., 1861
Hamel, Joseph A., Murray Bay, Q 1856
*Hamer, A. L., Bradford, Q 1887
Hammond, J. H., Montreal 1869
Hanna, A. E., Harlem, O 1885
Hanna, Franklin, Lansdowne, O 1879
Hanover, Willlam, Seaforth, O 1875
Hanvey, C. J. B., Yale, B C 1883
Harkin, F. McD., Vankleek Hill, O 1885
Hart, F. W., St. Martinville, La 1835
Harvie, J. B, 585 1st St., Troy, N Y 1881
Harvey, William A., Harriston, O 1874
*Harding, F. W., 1868
Harkin, Henry, Liverpool, Eng 1867
*Harkin, William, 1858
Hardness, John, Dickinson's Corners, O 1862
Harkness, Andrew, New Lancaster, O 1869
Harrison, David H., Manitoba 1864
Harrison, H. J., Moulinette, O 1883
Hart, George C., Prescott, O 1879
Hannington, E. B. C., Yale, B C 1875
Hawkins, A. C., Halifax, N S 1885
Hayes, James, Simcoe, O 1866
Haythorne, T. J., B.A., Charlottetown, P E I 1886
Heard, C. DeW., Keelby, Eng 1880
Hebert, P. Zotique, Whitehall, N Y 1873
†Henderson, Alex. A., Ottawa, 1870
*Henderson, E. G., 1874
*Henderson, Peter, A.M., 1846
Henderson, Andrew, Calgary, N W T 1880
*Henry, Walter, [Hon.] 1853
*Henry, Walter J., 1856
Henry, Wm. G., Detroit, Mich 1885
Henwood, Alfred J., Brantford, O 1879
*Hervey, Jonas J., 1866
Hetherington, Harry, Hatley, Q 1872
Heard, H E., Buffalo, N Y 1881
Hickey, Charles E., Morrisburg, O 1866
Hickey, Samuel A., B.A., Aultsville, O 1874
Higginson, H. A., Winnipeg, Man 1881
Hills, Joseph, Woonsocket, R I 1873
Hingston, W. H., Montreal 1851
Hockridge, Thos. G., London, Eng 1874
*Holden, Rufus, 1844
Holwell, John, Kingston, Jamaica 1868
*Holmes, Andrew F., (ad eun) 1843
Hopkins, Alfred J., Cookshire, Q 1883
Houston, D. W., Cohoes, N Y 1881
Howard, James, Lachine, Q 1867
Howard, Robert, St. Johns, Q 1872
Howard, R. Palmer, LL. D [Hon.] Montreal 1848
†Howard, R. J. B., B.A., Montreal 1882
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Howley, W. H., Detroit, Mich 1878
Howitt, Wm. H., Toronto, O 1870
Howland, Francis L., Huntsville, O 1807
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Hurlbert, E. Augustus, Brooklyn, N Y 1860
Hume, William L., Leeds, Q 1875
*Hunt, J., 1881
Hunt, Henry, Williamstown, O 1876
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†Hurd, Ed. P., Newburyport, Mass 1865
Hurdman, Benj. F. W., Inverness, Q 1882
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Hurlburt, Richard W., Mitchell, O 1873
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Irvine, R. T., Carp, O 1885
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Killery, St. John, Surg. Maj. Army 1862
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Lemoine, C., St. Pierre, Isle d'Orleans 1850
Lepailleur, Leonard, 1848
Leprohon, John L., Montreal 1843
Levi, Reuben, New York, U.S 1870
Lindsay, Heriot, St. Johns, Q 1861
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Logan, Robert, Iona, Mich 1880
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Longley, Edmund, 1866
Longpré, Pierre F., Quebec 1848
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Lunam, H., B.A., Campbellton, N B 1881
Lundy, E. L., Surg. Maj. Army 1862
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MacDonald, A. D., Wickham, N. B. 1887
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*McCullough, Michael, [Hon.] 1843
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†McDonald, John A., Montre l 1880
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McDonnell, Angus C., Montreal 1852
McDougall, Peter A., Ottawa, O 1864
*McDougall, Peter A., 1847
McEachran, Wm., Winnipeg, Man 1880
McEwan, Findlay, Carleton Place, O 1870
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McLaren, Peter, Paisley, O 1861
McLaren, Peter, Ormstown, Q 1872
McLaren, D. C., B.A., Galt, O 1880
*McLean, Alexander, 1860
McLean, J. W., Point Hastings, N S 1883
McLean, Thos. N., Fergus Falls, Minn 1882
McLean, J. M., B.A., Pictou, N S 1884
McLellan, Jas. H., Tignish, P E I 1884
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McLeod, James, Charlottetown, P E I 1873
McMeekin, J. W., Otter Lake, Mich 1885
McMicking, George, Goderich, O 1851
McMillan, Æneas J., Manitou, Col 1874
McMillan, D. L., Alexandria, O 1885
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McMurray, Samuel, 1841
*McNaughton, E. P., 1836
McNee, Stewart, Rosemount, O 1879
McNeece, James, Montreal 1869
McNeil, Ernest, Vernon River, P E I 1870
McNulty, M., Brashers Falls, N Y 1880
McQuillen, James, Marquette, Mich 1874
*McRae, George, 1876
McTaggart, Alexander, London, O 1860
*McVean, John M., 1865
Madill, John, Alliston, O 1867
Maher, J. J. E., New York 1883
Major, George W., B.A., Montreal 1871
Malcolm, John Rolph, Scotland, O 1861
*Malhiot, Alfred, 1846
Malloch, Edward C., Ottawa, O 1863
*Malloch, William B., 1867
Mallory, Albert E., Warkworth, O 1872
Marceau, Louis T., Napierville, O 1872
Markell, Richard S., Cloverdale, Cal 1868
*Marr, Israel P., 1849
Marr, Walter H., W 33rd St. N. York 1859
Marston, Alonzo W., Hull, Q 1871
Marston, John J., U. S. Army 1863
Martel, Ovide, Montreal 1883
Mason, J. L., M.A., Brailsford, Derby, Eng. 1863
Mattice, Rich. J., Omaha, U S 1875
†Mathieson, John H., St. Mary's, O 1871
*Mathieson, Neil, 1870
Mayrand, William, St. Andrews, Q 1847
Meahan, J. C., Bathurst, N B 1884
Meane, John, Staff Srg. Maj. Army 1869
Meek, Jas. A., 20 W 25th St. New York 1875
*Meigs, Malcolm R., 1865
Menzies, John R., Ft. Gratiot, Mich 1879
*Meredith, Thomas L.B., 1842
Merritt, D. P., B.A., Fitzroy Harbor, O 1884
Metcalfe, Henry J., Thurso, Q 1876
Mewburn, F. H., Galt Mines, N W T 1881
Mignault, Henry A., St. Denis, Q 1860
Mignault, L. D., B.A., Montreal 1880
Miller, R., Surg. N. W. Mounted Police, Battleford, N W T 1870
Mills, Thos. W., M.A., Montreal 1878
Miner, Frank L., Abercorn, Q 1877
*Mines, William W., 1874
Mitchell, Fred. H., London, O 1878
Moffatt, John Edw., Staff Surg. Army 1861
Moffatt, Walter, Pensacola, Fla 1852
Molson, Wm. A., Montreal 1874
Mongenais, Napoleon, Rigaud, Q 1865
Monk, George H., Dillonton, Q 1875
Moore, Charles S., London, O 1874
Moore, Jehiel T., Tilsonburg, O 1874
Moore, Joseph, 1852
Moore, Richard, 1853
Moore, Robert C., St. Paul, Minn 1869
Moore, William, Algonac, Mich 1881
Morgan, V. H., Aultsville, O 1887
*Morin, Jos. L. (Hon.), 1859
*Morrison, David R., 1869
Morrison, John, M.A., Waddington, N Y 1872
Mount, John W., Montreal 1851
Munro, Alexander, Montreal 1876
Munro, James T., Dominionville, O 1872
Muckey, F. S., St. Paul, Minn 1883
*Murray, Charles H., B.A., 1876
Murray, D., Plainfield, N S 1886
Musgrove, W. J., W. Winchester, O 1882
Neilson, W. J., Winnipeg, Man 1878
Nelles, J. M., Canton, Ill 1875
Nelles, John A., London, O 1850
*Nelson, Horace, 1851
*Nelson, Wolfred (Hon.), 1848
Nelson, Wolfred D E., Panama, C A 1872
Nelson, W. M. F., Montreal 1884
Nesbitt, Jas. A., Salt Lake City, Utah 1868
Nicol, Wm. R., Watkins, N Y 1872
*Nicholls, Chs. R., 1862
Norman, T. J., Schonberg, O 1887
Norton, Thos., Horning's Mills, O 1874
Oakley, Wm. D., Streetsville, O 1877
O'Brien, Thos. B. P., Srg. Maj. Army 1862
O'Brien, Robert S., Nanaimo, B C 1873
O'Brien, David, Renfrew, O 1873
O'Brien, T. J. P., Kansas City, Mo 1882
O'Brien, Timothy, Brudenell, O 1884
O'Callaghan, Cornelius H., 1854
O'Callaghan, T. A., B.A., Worcester, Mass 1880
*O'Garr, Peter, 1857
*O'Connor, Daniel A., 1867
O'Dea, James J., Stapleton, Staten Island, N Y 1856
Odell, William, 1849
O'Keefe, Henry, Minto, Dak 1882
Ogden, H. T., B.A., Milwaukee, Wis 1882
O'Leary, James, St. Pascal, Q 1866
O'Leary, Patrick, Mayo, Q 1859
Oliver, James W., Clifton, O 1868
O'Reilly, Charles, Toronto, O 1867
Orton, T. H., Hamilton, O 1886
Osborne, A. B., Hamilton, O 1886
Osler, Wm., 131 S 15th St, Philadelphia 1872
Palmer, G. F., Ottawa 1885
*Padfield, Charles W., 1868
Painchaud, Edw. S. L., Varennes, Q 1848
Pallen, Montrose A., New York 1864
Palmer, Loran L., Toronto 1866
*Paquin, Jean M., 1843
*Paradis, Henri, 1846
*Paradis, Pierre E., 1867
*Park, George A., 1877
Parke, Charles S., 1866
Parker, Rufus S., Canton, Mass 1866
*Patterson, James M., 1855
Paterson James, Winnipeg, Man 1864
*Pattee, George, 1858
Pattee, Richard P., Plantagenet, O 1874

*Patton, Edward K., 1867
Pegg, Austin J., Ossian, Iowa 1872
Pegg, Charles H., Chicago, Ill 1867
Perks, W. C., Woodstock, O 1881
Perrault, Victor, St. Eustache, Q 1852
Perrier, John, Cleveland, Ohio 1868
Perrigo, James, M.A., Montreal 1879
Perry, H. R., Coteau Landing, Q 1873
Phelan, C. J. R., Waterloo, Q 1865
Phelan, James B., Chicago, Ill 1874
*Phelan, Joseph P., 1854
Philip, David L., Brantford, O 1863
Phippen, S. S. C., Owosso, Mich 1883
*Picault, Charles, 1857
Pickup, John W., Brockville, O 1867
Pinsonneault, B., Chicago, Ill 1880
*Pinet, Alexis, 1840
Pinet, Alex. R., St. Laurent, Q 1864
Pomeroy, L. E. Mc., B.A., Tweed, O 1886
Poole, Alfred, Montreal 1886
Poole, H. E., Rossie, N Y 1880
Porteous, Wm., Montreal 1884
Porter, J. A., B.A., Kemptville, O 1887
Pothier, J. C., Woonsocket, R I 1857
Poussette, A. Courthorpe, Sarnia, O 1860
Powell, F. H., Ottawa 1885
Powell, Israel Wood, Victoria, B C 1860
Powell, Newton W. Cobourg, O 1850
†Powell, Robert H. W., Ottawa 1876
Powers, Geo. W., Eaton Corners, Q 1861
Powers, Lafontaine B., Port Hope, O 1867
Pringle, George, Cornwall, O 1855
Pringle, A. F., Northfield, Minn 1880
Pringle, W. R., Cornwall, O 1886
Prosser, W. O., Le Mars, Ply Co., Iowa 1874
Proudfoot, John S., Suspension Bridge, O 1868
Proudfoot, Alex., Montreal 1868
Proulx, Phileas, Montreal 1844
*Prevost, E. Gilbert, 1859
Pulford, F. W., Stonewall, Man 1880
*Quarry, James J., 1868
*Quesnel, Jules M., 1849
Rae, J. Hamilton (Hon.), London, Eng 1853
*Rainville, Pierre, 1863
Rambault, J., Dep. Insp. Gen. Army 1859
*Rattray, Charles J., 1871
Rattray, James C., Cobden, O 1874
Raymond, Olivier, Montreal 1850
Raymond, Alf., Moulinette, Q 1886
Raymond, G. H., B.A., Springfield, N B 1886
Read, Herbert H., Halifax, N S 1861
Reavely E., Port Robinson, O 1887
Redner, Horace P., Lonsdale, O 1864
Reddick, Robert, West Winchester, O 1874
Reddy, Herbert A., B.A., Montreal 1876
*Reddy, John (ad eun), 1856
Reed, Thomas D., Montreal 1871
Reed, John A., Sault Ste. Marie, O 1871
Reid, Alex. Peter, Halifax, N S 1858
*Reid, Kenneth, 1864
Renner, W. Scott, Jordan Station, O 1884
Reynolds, T. W., Hamilton, O 1881
Reynolds, Robert T., Berlin, O 1838
*Reynolds, Thomas, 1841
Richard, Marcel, Manchester, N H 1864
Richardson, G. C., South March, O 1887
Richmond, P. E., Mt. Pleasant, Minn 1873
Ridley, Henry Thomas, Hamilton, O 1852
*Rielle, Etienne R. E., 1857
Riley, Oscar H., Moer's Forks, Clinton Co., N Y 1879
Rinfret, Ferdinand R., Quebec 1868
*Rintoul, David M., 1854
Richardson, J. R., Archer av., Chicago 1865
Riordon, B. L., Toronto, O 1880
Ritchie, A. F., B.A., Duluth, Minn 1876
Ritchie, John L., Army Med. Dept. 1874
*Roberts, Edward T., 1859
Roberts John E., B.A., Montague, Jam., W I 1867
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Robertson, James E., Montague, P E I 1865
Robertson, David, Milton, Q 1864
Robertson, David T., Lennoxville, Q 1857
Robertson, Patrick, St. Andrews, O 1867
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Robillard, Adolphe, Ottawa 1860
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Robitaille, Louis, New Carlisle, Q 1866
Robitaille, L. T., Quebec 1858
†Roddick, Thomas G., Montreal 1868
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Rogers, E. J. A., Denver, Col 1881
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†Ross, James, B.A., Dundas, O 1881
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*Ross, Henry, 1872
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Rowell, G. B., Montreal 1884
Rugg, Henry C., Perth, O 1865
*Rumsey, William, 1859
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Rutherford, Clarendon, M.A., Chicago 1882
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Ruttan, A. M., New York 1880
Ruttan, R. F., Montreal 1884
*Sabourin, Moise, 1849
Sampson, James (Hon.), 1847
Sanderson, George W., Toronto, O 1850
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*Savage, Alex. C., 1866
*Sawyer, James H., 1863
*Schmidt, Samuel B., 1847
Schmidt, A. F., Montreal 1886
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*Schofield, David T., 1854
Scott, John G., Hazeldean, Co. Carlt., O 1879
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*Scott, William E., 1844
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Scott, W. McE., Winnipeg, Man 1883
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*Scriven, George Augustus, 1846
Scully, D. J., Lindsay, O 1887
Seager, Francis R., Brigden, O 1870
Secord, Levi, Bright, O 1876
Seery, F. J., Fredericton, N B 1886
Setree, Edward W., Heuvelton, N Y 1878
Séguin, André, Rigaud, Q 1848
Senkler, A. E., St. Paul, Minn 1863
Serviss, T. W., Selina, Frisco Co., Cal 1883
Seymour, M. M., Winnipeg, Man 1879
*Sewell, Stephen C. (ad eun), 1841
Sewell, Colin (ad eun), Quebec 1869
Shanks, J. C., Howick, Q 1881
Sharp, J. C., Maysville, N B 1885
Sharp, Wm., South Toledo, Ohio 1872
Shaw, Alexander, Watertown, Dak 1882
Shaw, W. F., Bracebridge, O 1879

Shaver, Peter Rolph, Stratford, O 1854
Shaver, W. H., Wales, O 1883
*Shaver, R. N., 1857
Shibley, J. L., B.A., Yarker, O 1858
Shepherd, Francis J., Montreal 1873
Sherk, George, Cheapside, O 1865
Shoebottom, Henry, Port Huron, Mich 1357
Shufelt, W. A., 250 W 11th St., N York 1881
Sihler, G. A., Simcoe, O 1883
*Simard, Amable, 1852
Simpson, Thomas, Montreal 1854
Sinclair, Coll, Aylmer, O 1874
Small, H. B., Ottawa 1880
*Smallwood, John R., 1868
Smellie, T. S. J., M.A., Pr. Arthur's Landing 1877
Smiley, J. S., Portsmouth, Iowa 1880
*Smith, Daniel D., 1868
Smith, Daniel F., Walkerton, O 1878
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*Smith, Edward W., 1859
Smith, John, Portland, Oregon 1879
Smith, Norman A., Frelighsburg, Q 1870
Smith, Wm., Lachute, Q 1879
Smith, Edward W., A.B., West Meriden, Conn 1882
Smith, W. A. de W., Montreal 1884
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Smythe, T. W., Colonel 100th Rgt., Dover, Eng 1848
Snider, Frederick S., Teeterville, O 1876
Sparham, Terence, Brockville, O 1841
Sparham, E. R., 1852
Spear, Andrew M., Danville, Q 1874
Spencer, R., Brandon, Man 1879
*Squire, Wm. Wood, M.A., 1876
Stafford, Fred. J., Little Bay, Nfld 1878
Stanton, George, Simcoe, O 1868
Stark, George A., Milwaukee, Wis 1872
*Staunton, Andrew, 1846
Stephen, W., Rosario, Argentine Rep 1881
Stephens G. C., Montreal, Q 1887
Stephens, Alex. D., Durham, Q 1857
Stevenson, Charles N., Coaticook, Q 1876
Stevenson, Hans, Wakefield, Q 1880
Stevenson, J. M., Bryanston, O 1856
*Stevenson, John L., 1855
*Stevenson, John A., 1873
Stevenson, Robert A., Strathroy, O 1871
Stewart, Alexander, Palmerston, O 1872
Stewart, Andrew, 1884
*Stewart, John Alexander, 1862
Stewart, James, Montreal 1869
Stewart, J. O., 1880
Stephenson, James, Iroquois, O 1850
Stimpson, Alfred O., Thompson, Pa 1863
St. John, Leonard, Chicago, Ill 1872
Storrs, A., Mexborough, York, Eng 1876
*Strobridge, James Gordon 1862
Struthers, A. D., Frelighsburg, Q 1881
Struthers, B. R., Rochester, Minn 1883
Stroud, C. S., Norway, Benton Co., Iowa 1876
*Sutherland, Fred. Dunbar, 1864
Sutherland, Walter, Ormstown, Q 1871
*Sutherland, Wm., 1836
*Sutherland, Wm., 1870
Sutherland, Wm. Dunbar, Montreal 1879
Switzer, Egerton R., Salina, Ks 1865
Tabb, Silas E., M.A., Sherbrooke, Q 1868
*Tait, Henry Thomas 1860
Taylor, Wm. H., Peterboro, O 1859
Taylor, Sullivan A., Gilmonton, N H 1870
Tew, H. S., Wakefield, York, Eng 1864
Temple, James A., Toronto 1865
Thayer, Linus O., Montreal 1859
*Theriault, F. D., 1883
Therrien, Honoré, Bedford, Q 1863
Thomas, W. R., Elkhart, Man 1886
*Thompson, James, 1842
Thompson, Robert, Brantford, O 1852
Thompson, Wm. A., New Richmond, Q 1862
Thornton, Hastwell W., B.A., New Richmond, Q 1882
Tracy, A. W., West Meriden, Conn 1873
Trapnell, H. E., Harbour Grace, Nfd 1887
Trenholme, Edward Henry, Montreal 1862
*Trudel, Eugene H., 1844
Trueman, J. E., Macan, N S 1881
*Turgeon, Louis G., 1860
Turnbull, R., Fort McLeod, N W T 1886
Tuzo, Henry A., 1853
†Tunstall, Simon J., B.A., Litton, B C 1875
Usher, Henry, Walkerton, O 1861
Vannorman, J. M., Detroit, Mich 1850
*Vercoe, Henry L., 1865
*Vicat, John R., 1867
†Vineberg, Hiram N., New York 1878
Wagner, A. Dixon, Cornwall, O 1872
Wagner, G. C., Dickinson's Landing, O 1881
*Wagner, Wm. H., 1844
Wakeman, Wilham, Quebec 1860
Wales, Benjamain N., Robinson, Q 1874
*Walker, Robert, 1851
Walker, Felix D., Launching, P E I 1884
Wallace, Isaac U., Milton, Q 1874
Walsh, Edmond C., Madrid, N Y 1866
Walton, George O., Barbadoes, 1873
Wanless, John R., Dunedin, New Z 1867
Ward, William T., Morristown, Minn 1873
Ward, Michael O'B., Montreal 1875
Warneford, P. H., Norton, N B 1887
Warren, Frank, Brooklin, O 1872
*Warren, Henry, 1860
Waugh, William, London, O 1872
Weagant, C. A., Yarker, O 1879
*Webb, James T. S., Montreal 1871
Webster, Arthur D., Edinburg, S 1873
Weilbrenner, Remi, Port Neuf, Q 1851
*Weir, Richard, 1852
*Wherry, John, 1862
White, F. J., Greenspound, Nfld 1886
White, W. W., M.A., St. Johns, N B 1886
Whitecomb, Josiah G., Omaha 1848
Whiteford, James W., Winnipeg, Man 1873
Whiteford, Richard, Toledo, Ohio 1857
Whitwell, W. P. O., Philipsburg, Q 1860
*Whyte, Jeseph A., 1870
Wigle, Hiram, Wiarton, O 1875
*Widner, Christopher [Hon.] 1847
*Wilcox, Marshall B., 1868
Wilkins, George (ad eun), Montreal 1886
Wilkins, H. P. Toronto, O 1887
Williams, J., Boston, Mass 1881
Williams, J. F., Barrie, O 1885
Williams, E. P., Ottawa, O 1887
Williston, H. V., M.A., Newcastle, N B 1879
Wilson, J. A. K., Manotick 1883
Wilson, Benjamin S., Belleville, O 1866
*Wilson, Robert M., 1850
Wilson, William, Ottawa 1857
Wilson, Samuel F., Millstream, Kings Co., N B 1884
Wilson, C. W., Cumberland, O 1886
*Wilscam, John Wilbrod, 1846
Wishart, D. G., Madoc, O 1885
Wolverton, Algernon, M.A., Hamilton, O 1868
Woods, David, Staff Surgeon Army 1860

†Wood, Edwin Geo., Londsboro, O 1885
Wood, George C., 1845
Wood, George, Faribault, Minn 1863
Wood, Ed. S., Faribault, Minn 1883
Wood, Hannibal W., Knowlton, Q 1865
Woods, Jno. J. E., Aylmer, Q 1875
Woodful, Sam. Pratt., Surg. Maj. 1864
Woolway, C. J. Copper Falls, Mich 1875
*Workman, Benjamin, 1853
Workman, Joseph, Toronto 1835
Worthington, A. N., Montreal 1866

Worthington, Edward [ad eun] Sherbrooke, Q 1868
Wright, John W., B.A., Picton, O 1878
Wright, Henry P., Ottawa 1873
Wright, Stephen, Ottawa, O 1859
Wright, William, Montreal 1848
Wye, John H., 26 Farrington sq., London 1868

Young, Philip R., Clarenceville, Q 1876
Young, Robert C., Ridgetown, O 1873
Young A. A., Barton, Vt. 1887
Youker, William, Belleville O 1870

*Deceased.
†Medalist.

MASTERS OF ARTS.

(For Addresses, see Lists of Bachelors of Arts and of Applied Science.)

Allworth, Rev. John. B.A. 1875
Amaron, Rev. Calvin E., B.A. 1880
Ami, Henry Mark, B.A. 1885
Archibald, John S., B.A. 1877
*Bancroft, Rev. Charles (ad eun) 1856
Bancroft, Rev. C., B.A. 1870
Baynes, Donald, B.A. 1867
Bethune, Meredith Blenkarne, B.A. 1869
*Bothwell, John A., B.A. 1868
Bowan, Wm. M. (Hon.) 1859
Boyd, John, B.A. 1864
*Butler, Rev. John (Hon) 1852
Cameron, Rev. James, B.A. 1874
Carmicha', Rev. J. B., B.A. 1871
Chamberlin, Browne, B.C.L. (ad eun) 1857
Chandler, George H., B.A. 1879
Chapman, Rev. Charles, M.A., London Univ. (ad eun) 1872
Clarke, Wallace, B.A., M.D. 1872
Clowe, John D., B.A. 1874
Cornish, Rev. George, B.A. 1963
Craig, James A., B.A. 1883
Crothers, Rev. Wm. J., B.A. 1875
Cunningham, Rev. Thos. E., B.A. 1883
*Cushing, Lemuel, B.A., B.C.L. 1867
Dart, Wm. J., B.A. 1874
Darey, J. Herbert, B.A. 1885
Davidson, Rev. James, B.A. 1866
Davidson, Charles P., B.A., B.C.L. 1867
Davidson, Leonidas H., B.A. 1867
Dawson, Rankine, B.A., M.D. 1882
Dawson, Wm. B., B.A. 1879
Dey, Rev. William J., B.A. 1875
Dewey, Finley McN., B.A. 1882
DeWitt, Caleb J., B.A 1864
Dickson, George, M.A., Victoria Col. (ad eun) 1879
Donald, James T., B.A. 1882
Dougall, John Redpath, B.A. 1867
Duff, Rev. Archibald, B.A. 1867
Duncan, Alexander E., B.A. 1875
Ells, Robert, B.A. 1875
Empson, Rev. John, B.A. 1879
Forneret, Rev. George A., B.A. 1880
*Gibb, George D., M.D. (Hon.) 1856
Gibson, Thos. A (Hon.) 1856
Gilman, Francis E., B.A. 1865
Gould, Edwin, B.A. 1860
Graham, John H. (Hon.) 1859
Green, Joseph, B.A. 1864

*Haight, Fred. S., M.A., Williams Col. (ad eun) 1882
Hall, Rev. Wm., B.A. 1867
Hart, Lewis A., B.A. 1869
*Hicks, Frank W., B.A. 1870
Hindley, Rev. John, B.A. 1873
Howe, Henry Aspinwall (Hon.) 1855
Jones, Montgomery, B.A. 1873
Kahler, Frederick A., B.A. 1872
Keays, Chas. H., B.A. 1883
*Kemp, Rev. Alex. F. (Hon.) 1863
Kennedy, George. T., B.A. 1872
Kennedy, Rev. John, B.A. 1860
Kirby, James, B.A., B.C.L. 1862
Krans, Rev. Edward H., B.A. 1875
Lafleur, Paul T., B.A. 1887
Laing, Rev. Robert, B.A. 1877
*Leach, Robert A., B.A., B.C.L. 1869
Lighthall, Wm. Douw., B.A., B.C.L. 1885
Lyman, A. Clarence, B.A. 1881
Lyman, Henry H., B.A. 1880
McCord, David R., B.A., B.C.L. 1867
McGregor, Rev. Duncan, B.A. 1874
McGregor, James, B.A. 1868
*McIntosh, John, B.A. 1878
McLaren, John R., B.A. 1868
McLennan, Rev Duncan H., B.A. 1875
Markgraf, Charles F. A. (Hon.) 1865
Mason, James L., B.A. 1868
Mattice, Corydon J., B.A. 1862
Morin, Joseph L., B.A. 1886
Morris, Alex., B.A., B.C.L. 1852
Morrison, Rev. James D., B.A. 1868
Morrisson, John, B.A. 1870
Munro, Rev. Gustavus, B.A. 1874
Naylor, W. H., B.A. 1885
Newnham, Rev. Jarvois A., B.A. 1883
*Perkins, John, B.A. 1862
Perrigo, James, B.A. 1869
*Plimsoll, Reginald J., B.A. 1867
*Ramsay, Robert A., B.A., B.C.L. 1867
Robins, Sampson Paul, B.A. 1868
*Rodger, David (Hon.) 1856
Ross, Geo., B.A., M.D. 1866
Roy, Rev. James, M.A., Victoria Col. (ad eun) 1879
Scrimger, Rev. John, M.A., Toronto University (ad eun) 1884
Shaw, Rev. W. J., M.A., Victoria Col. (ad eun) 1880
*Stewart, Rev. Colin Campbell, B.A. 1870

Sweeney, James F., B.A.....1881
Tabb, Silas Everett, B.A.....1869
Taylor, Rev. Ernest M., B.A.....1882
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* Deceased.

MASTERS OF ENGINEERING.

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Sproule, W. J., B.A.Sc.....1887
Waddell, J. A. L., B.A.Sc. (ad eun).....1882

MASTERS OF APPLIED SCIENCE.

Adams, Frank, B.A.Sc.....1884
Thompson, Wm. T., B.A.Sc.....1882
Wardrop, Norval, B.A.Sc.....1884

BACHELORS OF CIVIL LAW.

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Butler, Thomas P., Montreal.....1865
Cameron, John D., B.A., Dewittville, Q.1885
Capsey, George, Bedford, Q.....1877
Calder, John, 67 St. Sulpice St., Montreal1871
Carden, Henry.....1860
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Carter, Christopher B., 103 St. François Xavier St., Montreal.....1866
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Dorion, Adelard A. L., 160 Notre Dame St., Montreal.....1862
Dorion, Louis C. W., 24 St. James St., Montreal.....1877
Dore, Pierre J., Laprairie.....1880
*Doutre, Gonzalve.....1861
Doutre, Pierre.....1858
Downie, D., Montreal.....1880
Driscoll, Netterville H., 64 St. James St., Montreal.....1861
*Drummond, William D.....1867
Dubuc, Joseph, Manitoba.....1869
Duchesnay, Henry J. T., Beauce, Q.....1866
‡Duclos, Charles A., B.A., Montreal....1884
Duffett, Henry J., B.A., Megantic, Q....1885
Duffy, Henry T., B.A., Sweetsburg, Q..1878
Duhig, John T., Quebec.....1882
Dugas, François O., Montreal.....1880
Duncan, Alexander E., B.A., Montreal..1879
Dunlop, John, 102 St. François Xavier St., Montreal.....1860
Duprat, Pierre N.....1866
Durand, Nephtalie, 61 St. Sulpice St., Montreal.....1864
Elliot, Raleigh J., Montreal.....1886
Ethier, Leandre, 352½ Lagauchetière St., Montreal.....1879
Ethier, Marc, 25 St. Gabriel St., Montreal.1877
Fair, John, jun., Montreal.....1883
Falconer, Alex., B.A., Montreal.....1884
Faribault, Joseph E., L'Assomption, Q..1878
Farmer, Wm. O., Montreal.....1866
Fay, John E., Knowlton, Q.....1878
Fisher, Roswell C., Montreal.....1869
Fisk, John J., Coaticooke.....1868
Fleet, Charles J., B.A., Montreal.....1879
Foran, Thomas P.....1870
Forget, Adelard, 64 St. Gabriel St., Montreal.....1877
Forster, Joseph L., Montreal.....1881
Foster, George G., Knowlton, Q.....1881
Franks, Albert W.....1871
*Gardiner, Wm. F.....1856
Galarneau, Joseph Antoine.....1864
Galbraith, William, Kingston, O.....1875
Garon, Alphonse B.....1862
Gaudet, Oscar, 160 Notre Dame St., Montreal.....1878
Gauthier, Antoine N., Sault au Recollet, Q1881
Gauthier, D. Z., Sorel, Q.....1859
Gelinas, A., Manitoba.....1879
Geoffrion, Christopher A., 40 St. James St., Montreal.....1868
Gibb, James R., Montreal.....1868
Gilman, Francis E., M.A, 138 St. James St., Montreal.....1865
Girard, Alfred C., Marieville.....1882
Girouard, Desire, 56 St. François Xavier St., Montreal.....1860
Glass, James M., 62 St. François Xavier St. Montreal.....1877
‡Goldstein, Maxwell, Montreal.....1876
‡Gordon, Asa, Aylmer, Q.....1862
Gosselin, Jean, Quebec.....1877
‡Goodhue, Henry S. W., Montreal.....1877
Goyette, Henri A., Beauharnois, Q.....1880
Grahame, Dugald, 1134 Dorchester St., Montreal.....1883
‡Greenshields, James N., 102 St François Xavier St., Montreal.....1876
Greenshields, Robert A. E., B.A., Montreal, Q.....1885
Guertin, Alfred L., Montreal.....1882
Grenier, Amedée L. W.....1863
Guerin, Edmund W. P., B.A., Montreal.1881
Hackett, Michael F., Stanstead, Q.....1874

Hague, Frederick, Montreal 1883
Hague, Henry J., B.A., Montreal 1885
Hall, John S., B.A., 131 St. James St., Montreal 1875
Hall, William A., 34 St. James St., Montreal 1863
Hammond, Henry R., Chatham 1880
Harnett, Wm. de Courcy, Montreal..... 1870
Hart, Lewis A., M.A., 194 St. James St., Montreal 1869
Hemming, Edward J., Arthabaska 1855
‡Hodge, David W. R., B.A., Sherbrooke, Q 1874
Holton, Edw., 138 St. James St., Montreal 1865
Houghton, John G. K 1863
Howard, Rice M., Winnipeg 1869
Houliston, Alexander, Three Rivers, Q.. 1865
Hunter, Herbert S., Montreal 1880
Hunter, Walter, Hamilton, O 1883
*Huntington, Russ Wood 1875
Hutchins, Horace A., East Farnham ... 1883
‡Hutchinson, Matthew, Montreal 1873
Ingalls, Allen G., Granby 1881
Jackson, Samuel W., Montreal 1881
Jenkins, George E 1874
Jodoin, Isaie 1858
Johnson, Edwin R., Stanstead, Q 1866
Joliffe, William J., Montreal 1882
Jolly, James G., Rockburn, Q 1885
Jones, Richard A. A., B.A., Montreal... 1864
Joseph, Joseph O., 33 St. Gabriel St., Montreal 1864
Kavanagh, H. J., 117 St François Xavier St, Montreal 1878
Keller, Francis J., New York 1869
*Kelly, John P 1826
Kemp, Edson, B.A., Montreal 1859
Kenny, Wm. R., Aylmer, Q 1865
Kirby, James, M.A., Montreal 1867
Kittson, Geo. R. W., 60 St. James St., Montreal 1867
Klock, Robert A., Montreal 1882
Knapp, Frederick A., 17 St. John St., Montreal 1877
Labadie, M. T., Adolphe Montreal..... 1874
Labadie, V. A. Odilon, Montreal 1874
Lacoste, Arthur, Montreal 1869
Laflamme, R. G., Montreal 1856
Laflamme, Leopold, 42 St. James St., Montreal 1869
Lafleur, Eugène, B.A., Montreal..... 1880
*Lafrenaye, P. R 1856
Lamarche, Jos. L. R. dit Bricot, St. Vincent de Paul 1887
Lambe, William B., 63 St. Gabriel St., Montreal 1850
Lanctot, Husmer, 3 Place d'Armes Hill, Montreal 1878
Lanctot, Médéric, 69 Upper St. Urbain St., Montreal 1860
Lane, C., B.A., Montreal 1881
Laplante, Jean Bte., St. Stanislas..... 1880
Lareau, Edmond (ad eun), Montreal..... 1874
Larivière, Joseph 1874
Larose, Télesphore 1860
Lasalle, Lucien, 6 St. James St., Montreal 1877
Laviolette, PierreB., 16 Sts. Vincent St., Montreal 1878
Laurier, Wilfrid, Arthabaskaville, Q 1864
*Lay, Warren Amos 1867
Lawlor, R. and S., Aylmer, Q 1865
Leach, David S., Montreal 1861
*Leach, Robert A., M.A 1860
Lebœuf, Louis C., 57 St. Gabriel St., Montreal 1873
Leblanc, Albert, 23 St. Denis St., Montreal 1879
Ledieu, Léon, 1 St. Pierre St., St. Henri, Montreal 1879
*Lefebvre, Toussaint Z., Montreal..... 1882
Lefebvre, Frederic, 6 St. James St., Montreal 1863
Lebourveau, Steadman A., Montreal 1876
Leet, Seth P., 163 St. James St., Montreal 1879
Leet, Lynn Tell, Montreal 1883
Lighthall, W. D., B.A., Montreal..... 1881
Lighthall, George R., Montreal..... 1882
Levy, J. C. E., 20 St. Louis St., Montreal 1878
Lonergan, James, 34 St. James St., Montreal 1873
Lonergan, Michael L. S., Montreal..... 1871
Loranger, Louis George 1863
Lyman, Albert, B.A., Montreal..... 1881
Lyman, Elisha Stiles 1865
Lyman, Frederick S., B.A., Montreal.... 1869
‡Lynch, Wm. W., Quebec 1868
Mackay, Frs. S., Papineauville, Q 1886
Mackenzie, Fred., Montreal 1861
Mackie, John, Quebec 1886
Macpherson, Kenneth R., B.A., Montreal 1884
Madore, Camille, Notre Dame de Grace.. 1880
‡Major, David, 61 St. Gabriel St., Montreal 1875
Major, Edw. Jas., 403 Guy St., Montreal. 1871
‡Marler, Wm. De M., B.A., Montreal... 1872
‡Martin, John E., Stafford, Q 1883
Martineau, Paul G., 84 Champlain St., Montreal 1879
Matheson, Roderick D., Charlottetown, P.E.I 1884
McConnell, Arthur, Montreal..... 1883
McCord, David Ross, M.A., 131 St. James St., Montreal..... 1867
McCorkill, John C. G. S., Montreal..... 1877
McCormick, Duncan L., Montreal 1871
McDonald, Frank H 1873
McDonald, John S 1876
McDougall, John W. C., Three Rivers, Q 1877
McFee, Kutusoff N., B.A., Winnipeg.... 1880
*McGee, Thomas d'Arcy 1861
McGibbon, R. D., B.A., Montreal 1879
McGoun, Archibald, B.A., Montreal.... 1878
*McIntosh, John, B.A 1868
McKenzie, Peter S. G., Melbourne, Q... 1883
McKercher, John, Montreal 1880
McKinnon, Edmund 1878
McLaren, John Robert, M.A., 525 Sherbrooke St., Montreal..... 1859
McLaren, John J., Toronto..... 1868
*McLaurin, John Rice 1867
McLean, B. C., 19 St. Monique St., Montreal 1879
McLennan, William, Montreal..... 1880
McLennan, Francis, B.A., Montreal..... 1884
McLennan, Farquhar S., Montreal..... 1884
McMahon, Edward M., Montreal 1881
‡McMaster Donald, Montreal..... 1871
*McNaughton, Peter J 1879
Merry, John Westley, Sherbrooke, Q... 1870
Messier, Damase, 56 St. Gabriel St., Montreal 1875
Messier, Joseph S., St. John, Q 1863

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Mignault, Pierre B., 36 St. Vincent St., Montreal 1878
Mitchell, Albert Ed., Sweetsburg, Q..... 1867
Molson, Alexander, 101 St. François Xavier St., Montreal 1851
Monk, A., Montreal 1886
*Monk, Ed., Cornwallis 1870
Monk, Frederick D., Montreal 1877
Morgan, Edward A. D., Montreal 1882
Morin, Pierre A., Montreal 1878
Morris, Alexander, M.A., Toronto, O..... 1850
Morris, John L., 40 St. John St., Montreal 1859
Morrison, Adelard, Napierville, Q..... 1879
†Murchison, Roderick L., Dundee, Q.... 1887
Murray, J. Ralph, B.A., Montreal..... 1886
*Nagle, Sarsfield B 1862
‡Nicholls, Armine D., B.A., 48 Victoria St., Montreal 1879
Nichol, Thomas, M.D., LL.B., 140 Mansfield St., Montreal 1875
Nutting, Charles A., Waterloo, Q 1872
O'Halloran, George F., Cowansville, Q... 1885
Ouimet, Adolphe P., 332 Lagauchetiere St., Montreal 1861
†Oughtred, Allan R., Sheridan, O..... 1881
Painchaud, Joseph, Montreal 1880
Palliser, Joseph, 17 St. John St., Montreal 1877
Panet, Edouard A 1874
Papineau, Joseph G., St. 32 St. James St., Montreal 1869
Pariseault, Charles Ambroise..... 1859
Pelletier, Louis C., 446 Mignonne St., Montreal 1877
Perras, F. X., 4 St. James St., Montreal. 1878
Perry, Joseph, New Orleans..... 1869
*Perkins, John A., M.A..... 1860
Perodeau Narcisse, 5 St. Therese St., Montreal 1876
Piche, Aristide 1868
Pillet, J. Henri, Court House, Montreal.. 1879
*Plimsoll, Reginald J., M.A..... 1861
Polette, Wm. A., Montreal..... 1881
Polette, L. T 1886
Poutre, Felix E Montreal 1875
Power, Alexander W. A., Ottawa..... 1868
Prefontaine, Raymond, Montreal 1873
Purcell, John D., 146 St. James St., Montreal 1877
Rainville, Henri Benj., 43 St. Gabriel St., Montreal..... 1873
*Ramsay, Robert A., M.A., Montreal.... 1866
Raynes, Charles, B.A., Montreal..... 1881
Reddy, Wm B. S., Montreal..... 1880
*Redpath, Wm. W., B.A..... 1881
Ricard, Damase F. J..... 1859
Rielle, Norman T., B.A., Montreal..... 1884
Richard, Emery Ed., Battleford, N.W.T. 1867
Richard, Edward E..... 1868
Ritchie, Wm. F., B.A., Montreal..... 1879
Rexford, Wm. Hawkins, San Francisco, Cal..... 1865
Robertson, David E., Lennoxville, Q.... 1883
Robidoux, J. Emery, Montreal..... 1866
Robillard, Emile 1874
Robillard, Ovide..... 1886
Rochon, Charles A., 212 Notre Dame St., Montreal..... 1861
*Rogers, John Henry, B.A., Montreal.... 1884
Rose, Wm., London, England..... 1866
Rose, Walter Lord, 11 Hospital St., Montreal..... 1879
Rutherford, Alex. C., Woodstock..... 1881
Rutherford, McC., Woodstock..... 1881
Sabourin, Ernest..... 1863
Santoire, Camille, Montreal..... 1863
Sarasin, Ferdinand Leon, 16 St. Vincent St., Montreal..... 1871
Scallon, Wm.. Montreal..... 1876
Sexton, James Ponsonby, 59 St. François Xavier St., Montreal 1860
Sharp, W.. Prescott..... 1880
Short, Robert, Richmond, Q..... 1867
Sjorstrom, Paul R. D., Sherbrooke, Q.... 1881
Smith, Arthur, B.A., Montreal..... 1885
Smith, Robert C.. Montreal..... 1881
Shortiss, James, Three Rivers, Q..... 1881
Sicotte, V. B., Cadastre Office, Montreal. 1862
Snowdon, H. L., 67 St. Francois Xavier, Montreal..... 1856
Spong, John J. R., Montreal..... 1874
St. Jean, Edmund R., Montreal..... 1879
Stephens, Charles Henry, Montreal..... 1875
Stephens, George W., Montreal..... 1863
Stephens, Romeo H., 56 St. François Xavier St., Montreal 1850
Stephens, Charles O..... 1864
‡Struthers, Irving E., Phillipsburg, Q.... 1885
Tache, Pascal, Montreal 1876
Tait, Melbourne, Montreal 1862
Taschereau, Arthur, Quebec..... 1864
Taylor, A. Dunbar, B.A , Montreal..... 1878
Taylor, Reid, Montreal 1869
Terrill, Joseph Lee, Stanstead, Q..... 1865
*Torrance, Fred W , M.A., Montreal.... 1856
‡Trenholme, Norman W., M.A., Montreal 1865
Trenholme, Edward H., M.D., Montreal.. 1865
Trudel, Bouthillier J., 75 Dubord St., Montreal..... 1879
Tucker, Henry..... 1883
Vandal, Philippe, 58 St. Francois Xavier St., Montreal..... 1861
Vilbon, Charles A., 44 St. James St., Montreal..... 1863
Walker, Wm. S., 112 St. Francois Xavier St., Montreal 1874
*Walsh, Thomas Joseph..... 1860
Watts, Wm. J., B.A., Drummondville, Q 1869
Weir, Robert S., Montreal..... 1880
Weir, Wm. A., Montreal..... 1881
Weir, Frank, Montreal 1882
*Welsh, Alfred..... 1864
White, Wm. J., Montreal 1882
Wicksteed, Richard J., M.A., Ottawa.... 1868
Wight, James H 1868
Wood, Frank Ogilvie, Montreal..... 1870
Wotherspoon, Ivan T., (Laval) (ad eun), Montreal..... 1868
Wright, George C..... 1886
Wright, Wm. Mackay, B.A., Hull..... 1863
Wurtele, Charles J. C., Sorel, P.Q..... 1863
Wurtele, Jonathan S. C., Montreal..... 1870

*Deceased.‡ Elizabeth Torrance Medallists.

BACHELORS OF ARTS.

Allan, James G. (†E), Brooklyn, N.Y... 1873
Allan, John (N), Leeds, Q..... 1874
Allen, Frank A., Huntingdon, Q..... 1880
Allworth, John..... 1871
Amaron, Calvin E. (E2), Three Rivers, Q. 1877
Ami, Henry Mark, Geological Survey of Canada, Ottawa, O..... 1882
Anderson, Jacob de Witt, (†C)..... 1866
Anderson, James A., Montreal..... 1877
Archibald, John Sprott (†P), Montreal.. 1867
Atwater, Albert W., Montreal..... 1876
Aylen, Peter, B.C.L., Aylmer, O..... 1850
Bancroft, Rev. Charles, junior, Knowlton. 1866
Barlow, Alfred B. (N), Montreal..... 1883
Barnston, Alexander, (†)..... 1857
Barron, Thomas J., Lachute, Q..... 1882
Bayne, George D., Morrisburg, O 1880
Baynes, Donald, London, Eng..... 1864
Beckett, Wm. Henry 1866
Bell, John H., Kars, O..... 1886
Bennett, James, Montreal..... 1880
Bethune, Meredith Blenkarne (†N), Montreal..... 1866
Black, Chs., Granby, Q. 1881
Black, James R..... 1874
Blackader, Alex. D. (N), Montreal..... 1870
Blackader, Edward H., Montreal..... 1884
Blair, Geo. A., Manotick, O 1886
Blakely, Malcolm D., Montreal..... 1878
Bland, Salem G. (Morrin), Montreal . 1877
Bland, Charles E (†), Montreal..... 1883
Bockus, Charles E..... 1852
*Bothwell, John A. (†N), Montreal..... 1864
Bourne, N. A. F , Montreal, Q..... 1887
Boyd, John (2)..... 1861
Bracq, John C. (2), Grand Ligne, Q 1881
Braithwaite, E. E. (L), Unionville, O.... 1886
Brewster, Wm. (†)..... 1865
Brooks, Charles H. (†N), Constantinople. 1868
Browne, Arthur Adderley (E), Montreal.. 1866
Brown, Thomas..... 1853
Brown, S. R., Huntington, Q..... 1887
Browne, A. J. (†) Morrin, Montreal, Q... 1883
Budden, Hanbury A., Montreal..... 1865
Bull, Harcourt J. (†P), 16 Exchange Place, New York..... 1880
Bullock, Wm. E. (†P), Millbrook, O..... 1860
Calder, Geo. F., Stonefield, Q..... 1885
Cameron, James, M.A. (†), Millbrook, O. 1871
Cameron, John D., (†P), Dewitville, Q.. 1883
Cameron, Donald, Tiverton, O..... 1885
Cameron, Kenneth (†N), Montreal..... 1884
Cameron, Wellington A. (P), Montreal, Q. 1887
Campbell, Henry (Morrin), Durham, Q . 1885
Carmichael, James, Markham, O..... 1867
Cassels, Hamilton (Morrin), Millichamp's Building, Adelaide St., Toronto..... 1873
Cassels, Robert (Morrin) (P), Ottawa.... 1866
Chalmers, Wm. W., Huntingdon, Q..... 1886
Chandler, George H. (†), 32 Lorne av., Montreal..... 1875
Chipman, Clarence, Prescott, O..... 1866
Chubb, Sydney C. (N2), Brooklyn, N.Y.. 1877
Christie, John H., Lachute 1872
Christie, William, Lachute..... 1884
Clarke, Wallace (†E) 1869
Clay, Wm. L. (†), P.E.I..... 1887
Clements, Benjamin, Berthier en haut, Q.. 1886
Clerk, Ronzo H., Montreal, Q..... 1886
*Cline, John D. (†C)..... 1871
Clowe, John D..... 1863
Cockfield, Henry, Montreal..... 1882
Colby, Chas. W. (†E), Stanstead, Q..... 1887
Colquhoun, A. H. Urquhart (), Montreal. 1885
Cook, Archibald H. (Morrin), Quebec.... 1869
Cornish, Rev. Geo., B.A., London University (ad eun), Montreal..... 1856
Cox, Jacob W., Noel, Hants Co., N.S.... 1876
Craig, James A. (2), Fitzroy Harbor.... 1880
Craig, James, Renfrew, O..... 1874
Cross, Alexander S. (†P), Montreal 1879
Crothers, W. J. (P2), Phillipsburg, Q... 1872
Crothers, Robert A. (†C), Bedford, Q..... 1876
Coussirat, Rev. Adrian D. (ad eun), Montreal..... 1871
Cunningham, Rev. Thos. E. (P2), Aylmer 1880
Currie, Alex., Widder, O..... 1885
Currie, Dougald (E), Crinan, O..... 1880
Currie, W. T., Toronto, O..... 1885
*Cushing, Lemuel (C)..... 1863
Dalpe, W. H., Roxton Pond, Q..... 1886
Darey, J. Herbert (†), Montreal..... 1880
Dart, Wm. J., Laprairie..... 1868
Davidson, Charles Peers Montreal..... 1863
Davidson, Rev. James (ad eun), Montreal. 1863
Davidson, Leonidas Heber, Montreal..... 1863
Dawson, William B. (†N), Montreal..... 1874
Dawson, Rankine (2), Montreal. 1878
Dewey. Finlay McN. (P2), Richmond, Q 1874
Dey, William J. (†N), Montreal.. 1871
DeWitt, Caleb S., Lockport. Ill., U.S.... 1861
Dickson, James C., Montreal 1803
Dixon, Wellington (†E), Montreal..... 1883
Donald, James T. (†N), Montreal..... 1878
Dougall, Duncan, Windsor, O..... 1860
Dougall, John Redpath, Montreal..... 1860
Drummond, Chas. G. B. (N), Montreal.. 1862
Duclos, Charles A., (Morrin), Quebec ... 1881
Duff, Archibald (M), Airedale College, Yorkshire, Eng 1864
Duffett, Henry J., Megantic, Q..... 1883
Duffey, Henry T. (2), Bedford..... 1876
Duncan, Alex. E., Montreal..... 1867
Eadie, Robert (†), Oakland, O 1879
Elder, John (†P), Huntingdon, Q..... 1881
Ells, Robert (†N), Ottawa..... 1872
Empson, John, 71 University St., Montreal..... 1874
England, Luther M. (N), Knowlton, Q.. 1883
Evans, W. Herbert, Montreal..... 1886
Ewing, Wm., Winnipeg, Manitoba..... 1878
Fairbairn, Thomas (P2)..... 1863
Falconer, Alex. (†E), Montreal..... 1881
Ferguson, James D., (Morrin), Quebec.... 1880
Ferguson, John A. (Morrin), Quebec..... 1885
Ferguson, John S., Montreal..... 1861
Ferguson Wm. A. (†), Richibucto, N.B..... 1881
*Ferrier, Robert W 1857
Fessenden, Elisha Jos., Chippewa, O.... 1863
Fleet, Charles J. (), Montreal 1872
Forneret, Geo. E., Dunham Flats..... 1877
Fortin, Rev. Octave (ad eun) Winnipeg, Man..... 1867
Fowler, William (N)..... 1865
Fowler, Albert..... 1868
Fraser, John (Morrin)..... 1869
Fraser, William, Dundee, Q..... 1883
Fyles, Wm. A. (†C), South Quebec..... 1886

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Gamble, Robert, Billing's Bridge, O..... 1881
Gerrie, Andrew W., Fergus, O..... 1884
Gerrie, John P., Fergus, O..... 1887
Gibb, Charles, Montreal..... 1865
Gilman, Francis Edward, Montreal..... 1862
Gore, Frederick..... 1861
Gould, Charles H. (†C), Montreal..... 1877
Gould, Edwin, Montreal..... 1856
Graham, John (†E), Williamstown, O ... 1876
Graham, John H., Ormstown, Q..... 1878
Grandy, John, Millbrook, O..... 1866
Grant, Andrew S., La Guerre, Q..... 1885
Gray, Wm., Union Theological Sem., N. York..... 1876
Greenshields, Edward B. (†P), 305 Peel St., Montreal..... 1863
Greenshields, Samuel, Montreal 1874
Greenshields, Rbt. A. (†), Danville, Q.... 1883
Green, Joseph (†C), 600 West 5th St., Cincinnati, Ohio, U.S..... 1861
Green, Lonsdale, 118 Leadenhall St., London, E. C., Eng..... 1864
Gregor, Leigh R. (M2), Montreal..... 1882
Guerin, Edmund W. P., (†M), 102 St. Francois Xavier St., Montreal..... 1878
Guignard, J. A., B A., (Un. Fr.) ad eun, Ottawa..... 1883
Hague, Henry J. (†C), Montreal..... 1882
Hall, John S., Montreal..... 1874
Hall, Rev. Wm., 30 Fort St., Montreal.. 1861
Hargrave, Isaac L., High Bluff, Man..... 1886
Hart, Lewis A., Montreal..... 1866
Harrington, Bernard J. (†N), Montreal... 1869
Harvey, Alfred, St. John's, Newfoundland 1874
Harvey, Charles J., St. John's, Newfld . 1874
Haythorne, Thos., Charlottetown, P.E.I.. 1884
Hemming, Henry (Morrin), Quebec..... 1880
Henderson, Robert B. (M2), Montreal, Q. 1887
Hibbard, Fred. W., Frelighsburg, Q..... 1886
*Hicks, Frank W..... 1864
Higgins, Joseph H., Brucefield, O..... 1885
Hindley, John, Montreal 1868
Hodge, D. W. R. (†E), Sherbrooke, Q. 1872
Holden, Edgar De F., St. Armand Centre, Q..... 1886
Holiday, Caleb S., Huntingdon, Q ... 1870
Home, W. A., (Morrin), Quebec..... 1885
Howard, Robt. J. B. (†N), Montreal.... 1879
Hunter, Walter, B.C.L., Hamilton, O . 1883
Jones, Montgomery ( ), Hatley, Q..... 1869
Johnson, Alex. R. (†M), Montreal, Q... 1887
Johnston, Rev. Jas. A. (†P), Rutland, Vt. 1870
Johnston, Robt. (†). Kincardine, Q..... 1887
Joseph, Montefiore (N), Quebec 1870
Kahler, Frederick A. (†C), Germantown, Phil., U.S..... 1869
Keays, Charles H., Hamilton, O..... 1880
Kelly, Frederick W. (†V), Montreal.... 1871
Kemp, Edson, Montreal..... 1859
Kennedy, Geo. T. (N), King's College ... 1868
Kennedy, Robert Alex , Ottawa, O..... 1884
*Kershaw, Phillip G 1867
Kingston, Charles B., Montreal, Q..... 1887
Kinnear, George. Megantic, Q..... 1883
Kirkpatrick, Robert C., Montreal..... 1884
Kirby, James (†), Montreal 1859
Klock, Robert A., Aylmer, P.Q..... 1880
Krans, Edward H. (†E). New York..... 1865
Lafleur, Eugene (†P), Montreal 1877
Lafleur, Paul T. (†), Ottawa 1880
Lafleur, Henri A. (†N), Montreal 1882
Laing, Robert (†P), Halifax, N.S. 1868
Lane, Campbell, 293 Peel St., Montreal... 1879
Langton, J. F., Montreal, Q..... 1887
Lariviere, Vitalien, Roxton Falls, Q..... 1880
Lariviere, Dolard, Roxton Falls, Q..... 1884
Laurie, Arch. (Morrin)..... 1887

*Leach, Robert A..... 1857
Lee, Arch. (C), Pendleton, O..... 1883
*Lewis, Albert R. (B)..... 1869
Lighthall, William D. (†B), Montreal.... 1879
Livingstone, Colin H. (†), St. John, N.B. 1886
Lochhead, Wm. (N), Listowell, O..... 1885
Lyman. A. Clarence, Montreal..... 1878
Lyman, Henry H. (†N), Montreal..... 1876
Lyman, Frederick Stiles, Montreal..... 1863
Lyman, Walter E. (M L2), Montreal.... 1881
Mabon, James (†P), St. Louis de Gonzague, Q 1884
Mackay, Adams A. (†M), River John, Pictou Co., N.S 1884
Mackie, John F. (†) Morrin. Point Levi, Q..... 1883
Major, George W., Montreal..... 1870
Marceau, James 1884
Marler, Wm. de M. (†M), Montreal.... 1868
Martin, Alfred W., Montreal..... 1882
Martin, J. C. (B), Brown's Creek, P.E.I. 1885
Mason, James L..... 1859
Masse, Godefroi (†) Grand Ligne, Q..... 1884
Matheson, John, Presbyterian College, Montreal..... 1876
Mattice, Corydon J., Cornwall, O..... 1859
Maxwell, John (N), L'Orignal, O..... 1879
McArthur, Arch., Dalesville, Q..... 1887
McClure, Wm. (†M), Montreal..... 1879
McConnell, Richard G. (N), Montreal.. 1879
McCord. David Ross, Montreal..... 1863
McDonald, Hector C., Flat River, P.E.I. 1881
MacDonnell, Richard L. (†), Montreal.. 1873
MacDougall, John (†P), Ormstown, Q 1886
MacDuff, Alexander Ramsay..... 1866
McFarlane. James A. (†B), Pontiac, Q . 1885
MacKay, Daniel, Pictou, N.S..... 1882
McFadyen, Allan L., Montreal..... 1878
McFee, Kutusoff N. (†P), Winnipeg, Man..... 1874
McGibbon, Robert D., Montreal..... 1877
McGoun, Archibald (†P), Montreal..... 1876
McGregor, Archibald F., Listowell, O.... 1877
McGregor, James (C), Montreal..... 1864
McGregor, Duncan, Guelph, O..... 1871
*McIntosh, John (†M)..... 1870
McIntyre, Hector A., Manilla, O..... 1881
McKenzie, John (Morrin).. 1867
*McKenzie, Robert (P) 1869
McKenzie, Wm. A. (C), Lanark, O 1881
McKibbin, Wm. M., Edwardsburg, O.... 1875
McKibbin, Robert, Edwardsburg, O..... 1879
McKillop, Roland, Inverness, Q..... 1878
McKillop, Peter C., Inverness, Q..... 1882
McLaren. David C., Montreal 1878
McLaren, John R., 525 Sherbrooke St., Montreal..... 1856
McLaren, Harry (†), 67 Mansfield St., Montreal 1858
McLean, Neil W. (Morrin), (P2)..... 1869
McLean Bredalbane S., Montreal..... 1869
McLennan, Duncan H., Alexandria, O.. 1871
McLennan, John S. (P), Montreal..... 1874
McLennan, H. S. (†M), Montreal..... 1885
McLennan, George A., Underwood, O... 1885
Maclennan, Malcolm..... 1887
McLeod, Arch.. Orwell, P.E.I..... 1881
McLeod, Duncan C. (†M), Charlottetown, P.E.I..... 1873
*McLeod, Hugh..... 1866
McLeod, Findlay J., Winnipeg, Man 1872
McLeod, Norman (Morrin), Brompton Gore, Q..... 1883
McLeod, Murdoch J., Valleyfield, P.E.I.. 1887
McNabb, Robt., Woodville, O..... 1881
*McOuat, Walter (N)..... 1865

McOuat, John W., Inkerman, O 1886
McRae, Duncan A., Apple Hill, O..... 1886
McWilliams, Andrew, Ulster, O..... 1884
MacPherson, Kenneth R. († N),Montreal 1881
MacVicar, J. Harvey, Montreal..... 1885
Mercer, Walter D., Montreal..... 1880
Merritt, David, Prescott..... 1863
Molson. Chas. A. († N), Montreal..... 1880
Moore, Francis X 1868
Morin, Joseph L. († ML), Three Rivers, Mass., U.S..... 1882
Morris, William, Montreal..... 1859
Morris, Alexander, Toronto, O..... 1849
Morrison, John..... 1866
Morrison, Jas. D. (‡N), Ogdensburg,N.Y 1865
Morrison David W. (*), Ormstown, Q.. 1870
Muir, Andrew C., Georgetown, Q..... 1880
Muir, John F..... 1864
*Muir, Rev. E. P. (ad eun)..... 1865
Munro, Gustavus, Embro, O..... 1871
Mnnro, Murdoch, Williamstown, L'Orignal..... 1872
*Murray, Charles H. († N)..... 1873
Murray, J. Ralph († M), Montreal..... 1883
Murray, Alfred P., Montreal..... 1887
Naismith, James (*2), Almonte, O..... 1887
Naylor, W. H. (P), Clarendon, Q..... 1872
Newnham, Jarvois A., Montreal..... 1878
Nichols, Wm. A., Montreal..... 1887
Nicholson, John A., Eldon, P.E.I..... 1887
O'Halloran, G. F., Cowansville, Q..... 1883
O'Sullivan, R. Benj., Jamaica, W.I..... 1886
Ogilvie, Archibald N., Georgetown, Q... 1880
Oliver, Theophilus H. (Morrin) (P2).... 1866
Parent, Manasseh B. (†), St. Pie, Q..... 1884
Parsons, Simeon H., B.B. Univ. New Brunswick) (ad eun), Montreal..... 1881
Patterson, Wm. (C), Ormstown, Q..... 1886
Patton, Hugh M. (M 2), Montreal..... 1887
Pease, Geo. H. († C), 120 Broadway, New York 1664
Pedley, Hugh, Cobourg, O..... 1875
Pedley, Charles S. (P), Port Perry, O.... 1878
Pedley, James W., Cobourg, O..... 1884
Pedley, Francis (P), Cobourg, O..... 1886
Perrigo, James (N), Montreal..... 1866
*Perkins, John A 1858
Petit, Rev. Charles P..... 1850
Phillips. Charles W 1852
Pillsbury, Carroll E., Augusta, Me., U.S. 1880
*Plimsoll, Reginald J..... 1858
Porter, Jas. A. († N), Kemptville, O..... 1883
Pritchard, John C. (Morrin), Quebec... 1881
*Ramsay, R., Anstruther, B.C.L., († N), Montreal..... 1862
Raynes, Charles, Montreal..... 1880
*Redpath, George D., Montreal..... 1857
*Redpath, William W..... 1879
Reddy, Herbert L. (*)..... 1873
Reid, James (P2), North Mountain, O... 1881
Rexford, Elson I. (P), Quebec 1876
Rielle, Norman T. († *), Montreal..... 1882
Richardson, A. W., Montreal..... 1883
Ritchie, Arthur F. (†), St. Paul, Minn.. 1873
Ritchie, Wm. F. (†),660 Sherbrooke St., Montreal 1875
Ritchie, Philip E. († ML), Montreal.... 1886
Rivard Ed. S. (Morrin)..... 1887
*Roberts, George F. (P2) 1880
Roberts, W. D., Montreal..... 1886
Robertson, Alex. († N), 1100 Dorchester St., Montreal..... 1870
Robertson, Oeo., Garafraxa, O..... 1881
*Robertson, Robert (P)..... 1877
Robertson, Philip M., Montreal..... 1885
Robins, Sampson Paul († M), Montreal.. 1863
Rochester, Wm. M. (†), Montreal..... 1887
Rogers, George (N 2), Montreal..... 1884
Rogers, J. H. († P), Huntingdon, Q..... 1882
Rolph, Nothaniel (Morrin), Quebec..... 1885
Rondeau, Sam. (M 2), St. Elizabeth, Q 1884
Ross, George († C), Montreal..... 1862
Ross, James, († P), Huntingdon, Q..... 1878
Ross, L. F., Montreal..... 1883
Ross, J. T., (†) (Morrin), Quebec..... 1883
Russell, Henry, (Morrin)..... 1869
Russell, Walter, Bristol, Q..... 1887
Rutherford, Alex., B.C.L., Ormond, O . 1881
Sanders, Wm., Montreal..... 1887
Scott, Henry C. (Morrin) (P), Montreal.. 1866
Scott, Matthew H. († N), Bristol, Q..... 1877
Scrimger, Alex. (†), Galt, O..... 1883
Scriver, Charles W., Hemmingford, Q... 1880
Shearer, W. K., Athelstan, O..... 1883
Sherrill, Alvan F. († N), Omaha, Nebraska, U.S..... 1864
Silver, Herbert J. (Morrin), Danville, Q. 1885
Slack, George, Montreal..... 1868
Smith, Arthur W. (N), Montreal..... 1882
Smyth, Rev. Wm. J., (ad eun)..... 1887
Solandt, A. P., Inverness, Q 1887
Sparling, Wm., Stafford, O 1886
Stethem, George T..... 1859
Stevens, Wm. H., St. Johns, Q..... 1879
Stevenson, Samuel C., Montreal..... 1874
Stevenson, Rev. J. F., B.A., London Univ. (ad eun), England..... 1876
Stewart, Robert, Lachute, Q..... 1882
*Stewart, Colin Campbell († N)..... 1867
Stewart, Wm. S. († C), Charlottetown, P.E.I. 1878
Stewart, Wm. G. († N), Arundel, Q..... 1885
Stirling, Robert, Montreal 1882
Stuart, Gustavus G. († P), Quebec 1875
Swabey, Chas. († N), Charlottetown,P.E.I 1886
Sweeney, James F., Franklin, Q 1878
Tabb, Silas Everett (P), Sherbrooke, Q.. 1869
Taylor, Archibald D. (C), Montreal 1874
Taylor, Edw. T., Peshawa, Bengal, India 1878
Taylor, Ernest M., Chambly, Q..... 1875
Thomas, Henry W. († E), Montreal..... 1874
Thomas, F. Wolferstan G., Montreal..... 1882
Thompson, G. T. A., Harbor Grace, Nfld 1885
Thornton, Rev. R. McA., Toronto (ad eun), London, Eng..... 1872
Thornton, Hastwell W. (N), New Richmond, Q..... 1878
Topp, Francis († M), Granby, Q..... 1886
Torrance, Edward F. (P2), Peterboro, O. 1871
Torrance, Frederick W., Brandon, Man.. 1878
Torrance, John Fraser, Montreal 1872
Trenholme, Norman Wm. († P), Montreal 1868
Trenholme, Chas. W. (N), Montreal..... 1882
Tucker, Jno. W. († C), Montreal..... 1881
Tunstall, Simon J. (*), Montreal..... 1873
Tupper, James S. (C), Winnipeg, Man.. 1871
Turner, Walter H. († E), Montreal..... 1884
Unsworth, Jos. K. († E), Georgetown, Q. 1884
Walker, George F., Waddington, N.Y., U.S 1882

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Wallace, Robt. W. (P), London, O..... 1872
Wallace, Wm. E., Montreal..... 1886
Walsh, J. B. († N), Ormstown, Q 1887
Walters, Albert H. (Morrin), Quebec..... 1885
Ward, George B. († C)..... 1874
Warriner, Rev. William H. († E), Yorkville, O..... 1877
Watson, Murray, Montreal..... 1885
*Watson, Alindus J 1876
Watts, Wm. John(C), Drummondville,Q. 1866
Weeks, Wm. A., Charlottetown, P.E.I.. 1881
Wellwood, James, Minnedosa, Man..... 1878
Whillans, George (P2), Ottawa 1872
Whillans, Robert, Ottawa 1872
White, Wm., Montreal..... 1881
White, Walker W., B.A., Univ. New Brunswick (ad eun)..... 1885
Whyte, C. W., Montreal..... 1887
Wicksteed, Richard J. (C), Ottawa 1863
Wilson, John (P)..... 1866
Wood Frank O., Montreal 1869
Wood, Holton H., 764 Sherbrooke St., Montreal..... 1879
Wood, Thomas F., Montreal 1869
Wotherspoon, Ivan T. (Morrin) (P), Montreal..... 1866
Wright, George C., Hull, Q..... 1884
Wright, Wm. McKay, Ottawa 1861
Walker, John (Morrin), Quebec..... 1880
Walker, Thomas 1860
Yales, Nelson P. (P), Frelighsburgh, Q 1886

[C] First Rank Honours in Classics. [C2] Second Rank do.
[E] do do do in English Literature, etc. [E2] do do
[M] do do do in Mathematics and Physics. [M2] do do
[N] do do do in Natural Science. [N2] do do
[P] do do do in Mental and Moral Philosophy. [P2] do do
[ML] do do do in Modern Languages. [ML2] do do

† Indicates the Gold Medallist for the subject denoted by the letter to which it is prefixed; or, if standing alone, for best general standing. For the titles of the Gold Medals assigned to the several subjects since 1884, see § VI of Faculty of Arts.

In 1857, 1858, 1859, the Chapman Medal was awarded for the best general standing: 1860, 1861, 1862, for Classics; 1863 for Mental and Moral Philosophy; 1864 for Natural Science.

In 1862, the Prince os Wales Medal was awarded for Natural Science; 1863 for Mathematics and Physics; 1864 for Classics.

BACHELORS OF APPLIED SCIENCE.

In Civil and Mechanical Engineering.

Archibald, Hy. A., C.P.R.. Montreal.... 1881
Ball, John P., Harbor Works, Montreal.. 1887
Batcheller, Alvan A., Bedford, Q..... 1875
Bell, Robt. (N), M.D., Geological Survey, Ottawa..... 1861
Boswell, St. George J., Assistant Engineer Harbor Improvements, Quebec..... 1874
Boulden, Chas. M , Millersburg,Ky.,U.S. 1878
Brodie, Robert J., Smith's Falls, O..... 1873
Chipman, Willis (N), Brockville, O..... 1876
Collins, John J., Ottawa 1882
Cowie, Fred W., Montreal 1886
Davis, Allan R., Adolphustown, O..... 1884
Dawson, Geo. H ,St.Anne de Belleville,Q 1886
Dawson, W.Bell, M.A., C P.R ,Montreal 1875
Dowling, Donaldson Bogart (‡). Ottawa.. 1883
Drummond, Thos., Montreal..... 1882
Dudderidge, James, Lachute, Q..... 1880
Forneret, V. F. W., C.P.R., Montreal. . 1887
Furlong, Gordon, St. Anne, Q..... 1884
Fortier, Sam, Denver, Col..... 1885
Foster, Philip L., Longueuil, Q..... 1882
*Frothingham, John J..... 1875
Graham, Wm., St. Paul..... 1884
Green, Thos. D., Dominion Land Office, Ottawa..... 1882
Harvey, Chas. J., B.A., St. John's, Nfld. 1874
Hawley, David F., Aird, Q..... 1876
Hetherington, Frederick, Quebec..... 1876
Hall, Richard, Trenton, O..... 1878
Hill, Arthur E., Sydney, C.B 1875
Hislop, John L., C. P. Railway..... 1884
Jones, Thomas H., Bradford, O 1877
Kennedy, George T., M.A., Windsor .. 1873
Kerry, John G. G., (‡ B), Algoma Branch C.P.R 1886
Lesage, T. W., Montreal..... 1885
McCarthy, Jas. M., Ottawa..... 1887
McDonald, John, Omaha, Neb..... 1884
McEvoy, James, Ottawa, O 1883
McKenzie, John M , Stellarton, Pictou, N.S 1884
McLeod, Clement H., Montreal..... 1873
McLean, Alex. J., C.P.R., Lancaster.... 1874
McMillan, David E., G.T.R.,Chicago... 1874
Miller, Frederick F, (†), Napanee, O.... 1882
Moffatt, James W., Sault Ste. Marie.... 1884
O' Dwyer, John S. (‡),C.P.R. Algoma Br. 1880
Ogilvy, David, Omaha, Neb..... 1884
*Page, John 1875
Palmer, R. E., Baie des Chaleurs Ry.. 1887
Richard, Louis Napoleon. Ottawa..... 1881
Rinfret, Raoul, St. Stanislas de Batiscan, Q 1887
Robertson, George S., C.P.R..... 1874
Rogers, Richard B., Front Canal Works, Peterboro O 1877
Ross, George, Welland, O 1875
Ross, Philip D., Ottawa..... 1878
Routhier, Jude J. T., Vankleek Hill, O 1875
Saunders, Bryce J., Farmersville, O..... 1886
Skaife, Wilfred T., Montreal..... 1880
Smith, Richard F., Montreal 1883
Smith, Cecil Brunswick (‡), Winona, O . 1884
Sproule, Wm. J., Harbor Wks., Montreal 1877
Stewart, D. H., C.P.R., Montreal..... 1873
Swan, John, Windsor St., Montreal..... 1878
Taylor, Daniel, Duluth, O 1887
Thompson, Wm. T. (N), Qu'Appelle, N.W.T..... 1887
Thompson, Hedley Vicars (‡), C.B. & Q. Ry., Chicago 1885
Trueman, Harman, Truemanville, N.S.. 1886
Waddell, Robert Wm., Cobourg, O 1881
Waddell, J. A. L., C.E., Kansas City.. 1882
Walbank, Wm. McL., Union av., Montreal..... 1877
Wardrop, Norval, Detroit, Mich..... 1877
Wicksteed, Henry K., Port Arthur..... 1873
Wilson, Robert A., Winnipeg, Man..... 1875

In Mining and Assaying.

Brown, Chas. H. (N2), Duluth & Michigan Railway 1886
Carlyle, W. A. (‡B), (N), C. P. Ry., London, O. 1887
Ferrier, Walter F. (‡N), Montreal 1887
Howard, Wm. H. (N), St. Andrews, Q. 1883
Low, Albert P., (N), Ottawa, O. 1882
Macy, Ernest McC. (N), Algoma Mills, Q. 1885
Mathewson, Ed. P. (N), Pueblo, Col. 1885
Reid, Wm. M., Montreal, Q. 1886
Robert, Joseph A., Ottawa 1884
Robertson, William F. (N2), Montreal 1880
Rogers, Richard B., Peterborough O. 1878
Spencer, Joseph Wm. (N), University of Missouri, U.S. 1874
Torrance, John Fraser, B.A. (N), Montreal 1873
Trenholme, Chas. Wm. (‡B), Montreal 1885
Wicksteed, Henry K. 1874
Wilkins, Dan. F. H. (B.A., Tor.), (N), Mount Forrest, O. 1875

In Practical Chemistry.

Adams, Frank (N), Geological Survey, Ottawa 1878
Burland, Jeffrey H. (N2), Montreal 1882
Evans, Nevil N., Montreal, Q. 1886
Hamilton, Edward H. (N2), Montreal 1884
Weir, Arthur (‡), Montreal 1886

GRADUATES IN CIVIL ENGINEERING.

Barnston, Alexander, B.A. 1859
Crawford, Robert 1859
Doupe, Joseph, Winnipeg, Man. 1861
Edwards, George 1863
Frost, Geo. H., Tribune Building, N.Y. 1860
Gaviller, Maurice 1863
*Gooding, Oliver 1858
Gould, James H 1862
Kirby, Charles H., 58 Crescent St., Montreal 1860
McLennan, Christopher 1859
Reid, John Lestock, Prince Albert, Man. 1863
Rixford, Gulian Pickering 1864
Ross, Arthur 1860
*Savage, Joseph 1860
Walker, Thomas, B.A. 1860

‡ Gov.-General's Medal for highest general standing in Examinations for Bachelor of Applied Science; (‡B) British Association Gold Medal.

* Deceased.

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England, A. P., Dunham, Q.
Tellier, H., Montreal, Q.
Topp, Francis, Montreal, Q.

SECOND YEAR.

Budden, Hanbury Arthur, Montreal, Q.
Craigie, Archibald Walpole, Montreal, Q.
Dunton, Robert Andrew, Montreal, Q.
Fry, Henry, Montreal, Q.
Ferguson, John, St. Anicet, Q.
Reddy, John Flemming, Montreal, Q.

THIRD YEAR.

Beauregard, Henri Albany, St. Hyacinthe, Q.
Buie, Hector, Montreal, Q.
Burroughs, William Herbert, Montreal, Q.
Bricot dit Lamarche, Joseph Louis Rodrique, St. Vincent de Paul, Q.
Murchison, Roderick Livingstone, Dundee, Q.

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Addy, G. A. B., St. John, N. B.
Airth, H. W., Renfrew, O.
Aimon, G. M., Windsor, N.S.
Anglin, J. V., Kingston, O.
Ault, C. A., Oshkosh, Wis.
Aylen, J. P., Aylmer, Q.
Aylen, W. W., Aylmer, Q.

Baer, D. C., Summerfield, Ill.
Bayne, C. W., Merivale, O.
Bell, J. H., Kars, O.
†Berry, J. A., Berryton, O.
Berry, R. P., Lindsay, O.
Beers, A. H., Montreal, Q.
Berwick, R. H., Montreal, Q.
Bissett, C. P., River Bourgeoise, N. S.
†Bowen, W., Quebec, Q.

†Boone, S. W., Fredericton, N. B.
Bowes, E., Ottawa, O.
†Boyd, Jay, Vankleek Hill, O.
Burritt, C. H., Mitchell, O.
Blanchard, S., Valois, Q.
†Blackader, E. H. F., Montreal, Q.
Bradley, W. J., Ottawa, O.
Brown, G. A., Charlottetown, P.E.I.
Brown, P., Montreal, Q.
Bridges, H. H., Sheffield, N.B.
Broderick, E. J., Fredericton, N.B.
Booth, J. S., Montreal, Q.

†Cameron, K., Montreal, Q.
Cameron, J. J., Lancaster, O.
Campbell, G. G., Truro, N.S.
Campbell, G. M., Truro, N.S.
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Clouston, J. R., Maple Hill, Q.
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Delaney, W. J., Peterboro, O.
Desmond, F. J., Newcastle, N B.
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†Dickson, J. A., Trenholme, Q.
Donald, W. M., Seaforth O.
Duncan, G., Russel, O.

†Easton, C. L., Easton's Corners, O.
†Edgar, C. J., Napierville, Q.
England, W. S, Dunham, Q.
Esson, F. G., Halifax, N.S.
Esson, A. A., Halifax, N.S.
†Ellis, W. E., St. Catharines, O.
Evans, D. J., Montreal, Q.
†Evans, E. J., Seaforth, O.

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†Filmore, E. W., Baie Verte, N.B.
†Flagg, J. D., Morrisburg, O.
†Fraser, J., Hawkesbury, O.
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Fulton, C., Avonmore, O.

Garrow, A. E, Ottawa, O.
†Gardner, A. W., Cornwall, O.
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Gaskell, A. S., Brockville, O.
Goodwin, W. W., Baie Verte, N.B.
Greene, T. J., Appleton, O.
Guthrie, J. B., Guelph, O.
Gunne, N. D., Ailsa Craig, O.

Halpin, A. S., Lowell, Mass.
Haldimand, A. W., Montreal, Q.
†Hall, W., Walkerton, O.
†Hall, A G, Franklin Centre, Q.
Harris, N. M., Ormstown, O.
Harwood, L. L., Vaudreuil, Q.
Hardie, T. M, Ottawa, O.
Haggard, J., London, O.
†Hamer, A. L., Bradford, O.
Hayes, J., Nelson, N.B.
Hill, R. S., Montreal, Q.
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Hickey, W. H., Morrisburg, O.
Hewetson, J., Riverside, Ca.
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Hamilton, H. D., Montreal, Q.

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Irwin, H., Pembroke, O.
Irwin, W. T., Pembroke, O.

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Jento, C. P., Brockville, O.
Jenkins, W. E., Conquerall Banks, N.S.
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†McDonald, A. D., Wickham, N.B.
Mc onald, A., Mongenois, Q.
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†McDonald, D. D., North Lancaster, O.
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McDougall, D. S., Russell, O.
McCurdy, T., Ormstown, Q.
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McKay, E., Papineauville, Q.
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McLellan, A. A., Summerside, P.E.I.
McKechnie, R., Winnipeg, Man.
McKercher, H., Stiltsville, O.
McMartin, D R., Martintown, O.
McManus, H. D., Fredericton, N.B.
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McLean, D. W., Ottawa, O.
McLennan, D., Dunvegan, O.
McLeod, J. M., Ontario.
McIntosh, D. H., Carleton Place, O.
Muirhead, D. A., Carleton Place, O.
McNeece, J., Brampton, O.

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Morehouse, O. E., Upper Keswick, N.B.
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Murray, W W., Beechwood, O.

Noble, C. L., Sutton, O.
†Norman, T. J., Schonberg, O,
Notman, J. O., St. Catherines, O.

O'Connor, C., Worcester, Mass.
Oliver, A. J., Cowansville Q.
Orr, A. E., Cookshire, Q,
Orr, J. E., Mount Elgin, O.

Park, P. C., Durham, O.
Parker, W. D., Hawkesbury, O.
Palmer, P. E., Riverside, N.B.
Potton, H. M., Montreal, Q.
Pett s, F. C., West Brome, Q.
Philp, W. S., Montreal, Q.
Pirie, A. F., Dundas. O.
†Porter, J. A., Kemptville, O.
†Pothier, J. C., Woonsocket, R.I.
Potta, J. M., Belleville, O.

Quance, S. H., Elfrida, O.
Quirk, E. L., Aylmer, Q.

†Reavely, E., Port Robinson, O.
†Richardson, G. C., South arch, O.
Robertson, A. G., Iroquois. O.
Robertson, W., Chesterfield, O.
†Ross, D. L., Winthrop, O.
Ross, J., Halifax, N.S.

†Scott, J. M., Philadelphia, Pa.
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Shanks, A. L., Huntingdon, Q.
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Tackabury, E. G., Ottawa, O.
Taylor, W. B., Halifax, N. S.
Thompson, J. H., Gananoque, O.
Thompson, T. E., Montreal, Q.
T avers, J. B., St. John, N. B.
†Trapnell, H. E., Harbor Grace, N. F.
Treadwell, H. S., St. John's, N. F.

Vipond, A. E., Montreal, Q.

Weagent, A. A., Hosaic, O.
Weeks, C. M., Newport, N.S.
White, D. D., Montreal, Q.
Whyte, J. J., Upper Keswick, N.B,
Woodruff, E. H., St. Catharines, O.
Woodruff, T. A., St. Catharines, O.
†Warneford, P. H., Hampton, N.B.
Westly, R. A., Lancaster, O.
Wetmore, T. H., Bloomfield, N.B.
Wheeler, C. L., Montr al, Q.
†Wilkins, H. P., Toronto, O.
†Williams, E. P., Ottawa, O.
Wilson, W. A., Derby, N B.
Wylde, C. F., Halifax, N.S.

Yorston, F. S., Truro, N.S.
Young, A. A., West Albany, Vt
Young, H. E., Napanee, O.

† Passed Examination for M.D., C.M., 1887.

FACULTY OF ARTS.

Undergraduates.

First year.

Ault, Percy B.,	Aultsville, O	McDuffee, Lewis P.,	Stanstead, Q
Berwick, George A.,	Farnham, Q	McVicar, Donald,	Strathroy, O
Cameron, John A.,	Huntingdon, Q	Mack, Silas W.,	Ayer's Flat, Q
Colclough, Wm. F.,	St. Catharines, O	Martell, Dan E.,	Montreal, Q
Corcoran, A. J.	Warden, Q	Mathewson, George H.	Montreal, Q
Cushing, W. E.,	Montreal, Q	Mills, Seth A.,	Wakefield, Q
Daley, James,	Stouffville, O	Nicholls, Albert G.,	Montreal, Q
Davidson, Peers,	Montreal, Q	Paton, W. E.,	Sherbrooke, Q
Elliott, James A.,	Sharville, Q	Quimby, T. Lee,	Boynton, Q
Finch, C. W.,	Caledonia, O	Reed, Thomas B.,	Montreal, Q
Fry, Fred. M.,	Montreal, Q	Richardson, P. L.,	Lyn, O
Hall, Alex. R.,	Gananoque, O	Robertson, Andrew A.,	Montreal, Q
Hall, Richard S.,	Gananoque, O	Ross, Joseph J.,	Dewittville, Q
Hunter, James C.,	Pembroke, O	Sutherland, Hugh C.,	Embro, O
Kinghorn H. M.,	Montreal, Q	Tolmie, Alexander,	Montreal, Q
McCaskill, D. M.,	Montreal, Q	Tory, H. M.	Montreal, Q
McGregor, A. M.,	Montreal, Q	Trenholme, Edward C.,	Montreal, Q
McDougall, Robert,	Ormstown, Q	Walsh, Alex. W.,	Huntington, Q

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SECOND YEAR.

Deeks, W. E.,	North Williamsburg, O	Moore, Samuel,	Mille Isles, Q
Garth, W. H.,	Montreal, Q	Robertson, James	Waddington N. Y. U S
Gibson, W. D.,	Morrisburg, O	Rogers, William,	Lakefield, O
Holden, Donald B.,	Montreal, Q	Stevenson, James H.,	South Dummer
Jamieson, Walter L.,	Montreal, Q	Swanson, J. J.,	Stouffville, O
Lucas, M. F.,	Montreal, Q	Truell, Harry V.,	Stanstead, Q
McCusker, S. F.,	Hawkesbury, O	Walsh, Thos. N.,	Ormstown, Q
Mackenzie, R. T.,	Almonte, O	Warden W.,	Montreal, Q
Meighen, F. S.,	Montreal, Q		

THIRD YEAR.

Bryan, Andrew,	Richmond, Q	Macallum, Fred. K. W.,	St. Elmo, O
Bryson, Alfred P.,	Montreal, Q	McPhail, J. A.,	Orwell, P E I
Campbell, C. A.,	Smith's Falls, O	Martin, Charles F.,	Montreal, Q
Day, John L.,	Montreal, Q	Mason, Horace E. C.,	Montreal, Q
Duke, Wm. A.,	Carleton, St. John, N.B	Massé, Arthur	Grande Ligne, Q
England, George Prevost,	Montreal, Q	Morison, John Archd,	Ormstown, Q
Giles, Wm. Jas.,	Farmersville, O	Naismith, Peter L.,	Pembroke, O
Howitt, William,	Guelph, O	Pedley, Hilton	Cobourg, O
Le Rossignol, James E.,	Montreal, Q	Sweeny, George R.,	Montreal, Q
Lindsay, Norman,	New Richmond, Q	Thurlow, H. M.,	Ormstown, Q

FOURTH YEAR.

Bourne, Nicholas A. F.,	Montreal, Q	McLeod, Murdoch J.,	Valleyfield, P.E.I
Brown, Samuel R.,	Huntingdon, Q	Murray, Alfred P.,	Montreal, Q
Cameron, Wellington A.,	Montreal, Q	Naismith, James,	Almonte, O
Clay, W. Leslie,	P. E. I	Nichols, Wm. A.,	Montreal, Q
Colby, Chas. W.,	Stanstead, Q	Nicholson, John A.,	Eldon, P.E.I
Gerrie John P.,	Fergus, O	Patton, Hugh M.,	Montreal, Q
Henderson, Robert B.,	Montreal, Q	Rochester, W. M.,	Montreal, Q
Johnson, Alexander R.,	Montreal, Q	Russell, Walter,	Bristol, Q
Johnstone, Robert,	Kincardine, O	Sanders, William,	Montreal, Q
Kingston, Charles B.,	Montreal, Q	Solandt, Andrew P.,	Inverness, Q
Langton, J. F.,	Halifax, N. S	Walsh, James,	Ormstown, Q
McArthur, Arch.,	Dalesville, Q	Whyte, Charles W.,	Montreal, Q
McLennan, M.,	Scotstown		

Partial and Occasional.

Austin, Jas. M.,	Belleville, O	Deeprose, C. S.,	Montreal, Q
Baldwin, C. D.,	Montreal, Q	Dougall, G. M.,	Montreal, Q
Bartley, Thos. E.,	Montreal, Q	Dunlop, J. H.,	Montreal, Q
Bessey, Wm. M.,	Montreal, Q	Forbes, John J.,	Montreal, Q
Black, John F.,	Colquhoun, O	Francesco, Cesco B.,	Montreal, Q
Bouchard, Louis K.,	Sherbrooke, Q	Galley, Andrew,	Montreal, Q
Braithwaite, E. E., (B. A.)	Montreal, Q	Gunn, A. D.,	Nova Scotia
Caldwell, Henry,	Carney, O	Hamilton, G. M.,	Dundela, O
Campbell, D.,	Montreal, Q	Hampsen	Montreal, Q
Carpenter, George,	Lindsay, O	Hart, J. O.,	Montreal, Q
Cayer P. N.,	L'Ange Gardien, Q	Harte, Henry S.,	Montreal, Q
Charters, Frank,	Montreal, Q	Hausen, J. T	Montreal, Q
Coté, J. E.,	St. Césaire, Q	Hastings, C. S.,	Sweetsburg, Q
Cowie, W.,	Montreal, Q	Hill, James	Montreal, Q
Davey, Frank	Montreal, Q	Hodger, J.	Montreal, Q

Hunt, G. S.,	Ingoldsby, O	Mitchell, A. F,	Montreal, Q
Internoscia, A.,	Montreal, Q	Nesbitt, John A.,	Cowansville, Q
Johnston, George F.,	Chesterville, O	Rondeau, S. (B.A.),	Montreal, Q
Kerruish, T. L.,	Hamilton, O	Shaw, E. A.,	Montreal, Q
Kneeland, John A.,	South Stukely, O	Smith, G. A.,	Montreal, Q
Lambley, W. D.	Montreal, Q	Taylor, E. (B.A.),	Como, Q
Lee Wilberforce,	Toronto, O	Taylor, Richard F.,	Kingston, O
McAdie, James C.,	Montreal, Q	Trudx, Richard D.,	Ruthven, O
McKenzie, Murdock,	Montreal, Q	Vessot, C.,	Egypte de Milton, Q
McKercher, Colin,	Glengarry, O	Watt, W. J.	Montreal, Q
McLeod, Alex.,	Embro, O	Wells, Wm.	Montreal, Q
Medd Emmanuel	Montreal, Q	Yates, Nelson, (B.A.)	Frelighsburg, Q
Meek Henry A.,	Franklin Centre, Q		

SPECIAL COURSE FOR WOMEN.

Undergraduates.

FIRST YEAR.

Abbott, Maude M.,	Montreal, Q	Macfarlane, Mira,	Montreal, Q
Botterell, H. Inez R.,	Montreal, Q	Scott, Sara B.,	Montreal, Q
Botterell, Jeanie T.,	Montreal, Q	Williams, Annie,	Montreal, Q
Davidson, Clara F. M.,	Frelighsburg, Q		

SECOND YEAR.

Henderson, Mary H.,	Montreal, Q	Turner, Edith,	Montreal, Q
Reid, Helen B,	Montreal, Q	Wilson, Alice Maud,	Montreal, Q
Squire, Maude M.,	Gananoque, O		

THIRD YEAR.

Cross, Eliza C.,	Lachine, Q	Murphy, Martha,	Montreal, Q
Evans, Blanche B.,	Montreal, Q	Murray, Alice,	Montreal, Q
Hunter, Georgina,	Montreal, Q	Palmer, Jane N.,	Ottawa, O
McLea, Rosalie,	Montreal, Q	Ritchie, Octavia,	Montreal, Q
McFee, Donalda,	Montreal, Q	Simpson, Mary C.,	Montreal, Q

Partial.

Beard, Eleanor E. G.,	Montreal, Q	Kennedy, L. Marion,	Montreal, Q
Blackader, Helen E.,	Montreal, Q	Morgan, Charlotte M.,	Montreal, Q
Claxton, Fannie,	Montreal, Q	Morgan, E. M,	Montreal, Q
Claxton, L. Louise,	Montreal, Q	Rawlings, Lucretia,	Montreal, Q
Day, Helen R.,	Montreal, Q	Stayner, Kathleen B.,	Montreal, Q
Denoon, Annie,	Montreal, Q	VanHorne, Addie,	Montreal, Q

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Occasional.

Archibald, Louisa G.,	Montreal, Q	McBratney, J. M.,	Montreal, Q
Bryson, Grace A.,	Montreal, Q	McCallum, Annie,	Montreal, Q
Beers, Edyth,	Montreal, Q	Macdonell, Blanche L.,	Montreal, Q
Bell, Mary L.,	Montreal, Q	Macfarlane, Jessie J.,	Montreal, Q
Capel, Katie M.,	Montreal, Q	McFee, Elizabeth,	Montreal, Q
Charlton, Emma,	Montreal, Q	Magor, Mary E.,	Montreal, Q
Charlton, Margaret,	Montreal, Q	Minchin, Louisa,	Montreal, Q
Darey, Harriet,	Montreal, Q	Morey, May,	Montreal, Q
Edwards, Mary G.,	Montreal, Q	Morton, L. H.,	Montreal, Q
Evans, Mabel N.,	Montreal, Q	Norman, Charlotte,	Montreal, Q
Ferrier, Florence M.,	Montreal, Q	Pangman, Florence B.,	Montreal, Q
Gardner, Mary,	Montreal, Q	Phillips, Sarah A.,	Montreal, Q
Hall, Emma,	Montreal, Q	Redpath, Amy,	Montreal, Q
Hausen, K. T.,	Montreal, Q	Saxe, Fanny M.,	Montreal, Q
Henderson, Jane C.,	Montreal, Q	Scott, Anna G.,	Montreal, Q
Hutchison, Lillian A.,	Montreal, Q	Scott, May,	Montreal, Q
Johnson, H. L.,	Montreal, Q	Scott, Hope,	Montreal, Q
Johnson, N.,	Montreal, Q	Stevenson, Bertha P.,	Montreal, Q
Kerry, Helen,	Montreal, Q	Taylor, May,	Montreal, Q
Locke, Helen,	Montreal, Q	Trenholme, Lucy H.,	Montreal, Q
Lord, N. E.,	Montreal, Q	Vipond, M.,	Montreal, Q
Lyman, J. C.,	Montreal, Q	Wilson, F. N.,	Montreal, Q

MORRIN COLLEGE, QUEBEC.

Undergraduates.

Macleod, Euphemia,	Quebec	Jamieson, William T.,	Inverness, P Q
Fergusson, Kate Anderson,	Quebec	Jamieson, David M.,	Inverness, P Q
Sloane, Edith Jane,	Quebec	Blue, John H. F.,	Metis, P Q
Lamont, John,	Marsden, Q	Desbrisay, Charles,	Jacquet R., N B
Whitelaw, James Menzies,	Valcartier, Q	Livingston, Neil,	Hampden, P Q
Robertson, Adam,	Edinburgh, Scotland	Brodie, Charles E.,	Quebec
Down, John,	Quebec	Brown, William R.,	Quebec
Rivard, Edward Samuel,	Montreal	McCullough, Robert,	Inverness, P Q
Laurie, Archibald,	Quebec	Anderson, Duncan P.,	Levis, P Q
Craig, Hugh,	Marlow, P Q	Smith, George H.,	Hawkesbury, Ont
Hunter, Alexander,	Inverness, P Q	Parker John,	Lachute, P Q

ST. FRANCIS COLLEGE, RICHMOND,

Undergraduates.

Jones, Arthur,	Richmond, P Q	Dunton, George,	Richmond, P Q
Parker, John,	Leeds, P Q	Bayne, N.,	Leeds, P Q
Elliott, E. A.,	Silverton, P Q	Dennon, W.,	Dennon's Mills, P Q
Read, F. W.,	Montreal, P Q	Tamsworth, R. H.,	Eaton, P Q
McLeod, A. J.,	Bramptongore, P Q	Dresser, J.,	Cleveland, P Q
Bowden, W.,	Richmond, P Q	Logie, E. S.,	Leeds, P Q
McKenzie, R. A.,	Melbourne, P Q	Reid, W. D.,	Leeds, P Q
McHang, R. J.,	Leeds, P Q	Moore, A.,	Kingsey, P Q

FACULTY OF APPLIED SCIENCE.

FIRST YEAR.

Coleman, W. J.,	Montreal	Mooney, G. H.,	Montreal
Ellacott, C. R.,	Cote St. Antoine	Monk, W.,	Montreal
Evans, P. N.,	Montreal	Ogilvie, A. T.,	Montreal
Goulet, J. A. G.,	St. Eustache, P Q	Redpath, P. W.,	Montreal
Hawkes, A. H.,	Listowel, O	Reed, C. B.,	Montreal
Jamieson, R. H.,	Montreal	Smail, W.,	Montreal
Mattice, C. J.,	Cornwall, O	Williams, M. E.,	Montreal

1886-7

SECOND YEAR.

Addie, G. R.,	Sherbrooke, Q	McFarlane, M. C.,	Almonte, Q
Antliff, J. H.,	Montreal, Q	McKenzie, C. P.,	Danville, Q
Bertrand, J. T.,	Isle Verte, Q	McLennan, M. J.,	Williamstown, O
Edwards, G. M.,	Montreal	Naismith, P. Q.,	Pembroke, O
Hersey, M. E.,	Montreal	Tuplin, J. P.,	New Annan, P E I
Hunter, R. E.,	Sorel, Q	Young, A.,	Almonte, O
Lea, R.,	Victoria, P.E.I.		

THIRD YEAR.

Carmichael, W. J.,	Longueuil	Lovelace, E. S. N.,	Longueuil
Childs, A. E.,	Montreal	May, J. E.,	Ottawa, O
Drummond, A. L.,	Montreal	Macnutt, C. H.,	Ottawa, O
Eneas, A. G.,	Montreal	Ogilvy, R. F.,	Montreal
Green, C.,	Newboro, O	Tremblay, A. J.,	St. Roch des Aulnets, Q
Hamilton, W. J.,	Montreal	Walters, C. N.,	Montreal
Hopkins, N. W.,	Stoney Creek, O		

FOURTH YEAR.

Ball, J. P.,	Charlottetown, P E I	McCarthy, J. M.,	Sorel, Q
Carlyle, W. A.,	Woodstock, O	Palmer, R. E.,	Charlottetown, PEI
Ferrier, W F.,	Montreal	Rinfret, R.,	St. Stanislas de Batiscan, Q
Forneret, V. F. W.,	Berthierville, Q	Taylor, D.,	Waterloo, Q

PARTIAL.

Drummond, T.,	Manitoba	Murray, W. A.,	Cote St. Antoine
Loggie, C. J. C.,	Montreal	Ramsay, H. M.	Cote St. Antoine
Hampson, H.,	Montreal	Reekie, R. J.,	Cote St. Antoine
McFarlane, W. D.,	Cote St. Antoine	Warren, J. S.,	Brooklyn, O

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SUMMARY.

Students in Law, McGill College		10
" in Medicine "		236
" in Arts "	Undergraduates	98
	Partial and Occasional	55
" Special Course for Women—		
	Undergraduates	22
	Partial	12
	Occasional	44
" in Applied Science,	Undergraduates	48
	Partial	8
" in Arts, Morrin College, Undergraduates		22
" " St. Francis College, Undergraduates		16
Total number of Students		571
Deduct entered in two Faculties		3
		568
Teachers-in-training in Normal School		72
Pupils in Model Schools		385
Total Students and Pupils		1025

MCGILL UNIVERSITY LIBRARY

SUPPLEMENTAL EXAMINATIONS, 1886-7.

For Undergraduates in Arts.

PASSED.

I.—September, 1886.

(*a*) Supplemental Sessional.

Third Year.—Bourne, Henderson (R. B.), McLeod (M. J.)
Second Year.—Masse, Murray, Murphy, Palmer, Sweeny, Thurlow.
First Year.—Garth, Warden.

(*b*)—Supplemental in one subject.

Third Year.—Naismith (J.).
Second Year.—Bryson, England, Naismith (P. L.).
First Year.—Mackenzie, Holden, Lucas, Moore.

II.—February, 1887.

(Supplemental to Christmas Examinations.)

(*a*)—Supplemental in two or more subjects.

First Year.—Cushing.

(*b*)—Supplemental in one subject.

Third Year.—Murray, Sweeney.
Second Year.—Lucas.
First Year.—Elliott, Hunter, McDuffee.

Higher Examination of Women.

SENIOR ASSOCIATES IN ARTS.

1880.

GEORGINA HUNTER, MONTREAL.]

1881.

MARGUERITA FRANCIS, MONTREAL.

1885.

AGNES E. LIVINGSTONE, ST. JOHN, N.B.

School Certificates of the University.

ASSOCIATES IN ARTS.

1865.

Montgomery Jones
John Ferguson
Charles Cushing
Robert H. Conroy
Samuel Stevenson
Wallace Clarke
Frederick W. Evans
Robert W. Forrester
Edward B. Greenshields
Montgomerie Lewis
George Joseph Bull
Albert Murray
Daniel McLachlan

1866.

Sidney Arthur Fisher
Charles E. Porteous
Will. W. Walkem
Charles G. Stewart
Geoffrey W. Porteous
Florence David
Hew D. Whitney
George W. Torrance
Robt. M. Esdaile

1867.

Charles H. Ferry
James Rodger

1867.—*Continued.*

Geoffrey W. Porteous
Thomas C. Thompson
Francis J. Shepherd
Gerald Lloyd

1868.

John Fraser Torrance
Will. Osborne M. Cross
Henry G. W. Badgley
John B. Abbott
John Gray Grant
Thomas C. Hempstead

1869.

Arthur F. Ritchie
Simon J. Tunstall
Charles R. Jones
O'Hara Baynes
Aaron D. M. DeSola
Charles Jas. Fleet
John Thos. Caldwell
James M. Mitchell
John Kay
James Green

1870.

William Bell Dawson

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1870.—*Continued.*

Archibald D. Taylor
Hiram B. Stephens
Henry W. Thomas
Samuel Greenshields
Sheringham A. Shepherd
William McEachran
David S. Robertson

1875.

William D. Lighthall
W. A. Farwell
Robert T. B. Howard
Charles A. Molson

1876

J. Herbert Darey
Paul Theodore Lafleur
Edwin Hudson Bisset
Andrew G. Ross
James R. Foster
Frederick Mindon Cole
William Dawson McGregor
John Ewart
J. Gordon Gibson
Wilfred T. Skaife
Charles J. Walker

1877.

Alexander Falconer
Thomas B. Macauley
Armand F. Teefy
Mina Douglas
M. Stuart Fraser
William Martin
Walter H. Snow
Louisa McFee
Margaret A. Mills
Ida Papineau
Walter E. Lyman
Helen Macklen
Jane Darling
George Graham
Murray A. Biggar
Jessie Ross
Eva Dawson
Alice Cumming
Kenneth R. Macpherson
Walter H. Lancey
Robert A. Wallace
Alexander McGibbon
Marietta Jones
Frank Weir
Nathaniel D. Drew

1878.

Henri A. Lafleur
Grace Darling
Henry R. Fairclough
Andrew Lawson
William H. Boyle
N. J. Rielle
George Kapelle
John B. Rose
Lillian Martin
Henry Cockfield
Louisa Harrison
David Young
Lawrence C. Rose
Jessie Radford
Kate McKeand
Maggie Stewart
Maggie Campbell
A. W. Martin
Florence W. Bissett
C. W. Trenholme
Robert Stirling
Maggie White
Frederick E. Belcher
Anna Baxter
Minnie Greenshields
Emma D. Meikle
C. D. Godfrey
Lawrence MacRae
Neil McLennan

1879.

James Charles Allan
Charles Edward Bland
George W. Hambly
John C. Fields
B. Norman Hudspeth
Louisa McDonald
Wyatt G. Johnston
Robert Little
Henry J. H. Petry
Edward J. K. Noyes
Edith Durdan
Adolph Craft
Richard F. Morris
William Morris
Duncan D. McTaggart
Archibald McK. McMechan
Donald John Fraser
John Coutts
Thomas Crawford
Jessie McConnell
Devereux Emmet
Alfred E. A. Barlow
Elizabeth Smith
Claude L. Wheeler
Charles McP. Holt

1879.—*Continued.*

Maggie Osgood
George S. Baker
Arthur G. Weld
William L. Murray
Christina J. Galt
George R. Mill
Alexander Malcomson
Thomas J. Tait
Kenneth D. Young
Albert W. Haldimand

1880.

Edward H. P. Blackader
William Logan
Mary J. MacCallum
Walter H. Turner
Minnie H. McKean
Mary B. Badenach
Wm. C. Morrison
Robert C. Kirkpatrick
Julius T. Gnaedinger
Richard S. Kinghorn
Jean W. Johnston
Norman R. Macaulay
Hugh McLennan
William Cherrie
Eugene McMullan
Elena C. Livingston
William Christie
James C. McNaughton
Lyman Duff
John D. Courtney
Maud M. Lamb
William Gibson
James B. Gibson
Frank Baker

1881.

Frank P. Bernard
Charles R. Daoust
Frederick L. Barlow
Percy E. Judge
Peter C. Mitchell
Alexander J. Tolmie
William Mitchell
Edward P. Mathewson
Henry Munderloh
Ellen E. Coo
Wilfred R. Morris
John J. Arnton
Hanbury A. Budden
Manson D. Teetzel
William T. Gunn
George H. Guy
Charles Burkholder
William M. Reid
Phillip M. Robertson
Percival Tibbs
William Reid
Ellen F. Kemp
Grace Foster
Alice M. Cook
James W. Morrice
Ridley L. Charlton
James H. Bissett
Andrew Stuart
Mary E. Clunie
Archibald Robertson
Arthur H. Irwin

1882.

Albert G. B. Claxton
Philip E. Ritchie
Alexander R. Johnson
John G. G. Kerry
William S. Leslie
Nevil N. Evans
Charles P. Brown
Walter F. Ferrier
Thomas J. Vipond
Charles J. Robertson
William H. Evans
John T. Crawford
Robert S. Ross
Ronzo H. Clerk
Arthur Weir
William A. Home
Adelaide M. Bastable
James R. Kinghorn
Frederick H. Johnson
Orrin Rexford
Leslie G. Craig
Marion Taylor
Flora Taylor
William Hilton
Cecil M. Maxwell
Ernest Munro
Brain H. Wand
William A. Logie
William A. Fyles
Mary H. Ellicott
Harriet A. Darey
Mary J. Metcalfe
Emily F. Gross
William H. Bentley
Ernest L. Allard
Florence N. Wilson
George H. Dawson
James Laurie
Elizabeth Christie
Elizabeth Donnelly
Alice M. Wilson
Laura M. McLaren

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1882.—*Continued.*

Mary E. Meikle
Christina Wilson
James H. Woods
Phoebe E. Elliott
Ida F. Smith
Jane M. Bremner

1883.

Meredith O. Smith
Wellington A. Cameron
Hugh M. Patton
Annie C. McGregor
Hubert D. Hamilton
Henry W. Welch
Rowland S. Hill
Joseph C. Barlow
Ellen M. Clunie
Arthur D. Fry
Albert H. Campbell
Alexander T. Galt
Albert E. Holt
Alfred P. Murray
Geo. A. Clunie
Howard D. Kemp
Samuel Cumming
Wm. J. Carmichael
Charles B. Kingston
Helen B. Blackader
Mabel Aldrich
Charles L. Walters
Robert B. Henderson
Henry G. McLaren
Wm. A. Nichols
Edith Turner
Alexander McLennan
Geo. S. Cantlie
Lawrence A. Darey
Andrew B. Clark
Peter Reid
Neil B. McTaggart
Mattie C. Murphy
Alfred P. Bryson
Graham B. Macpherson
Ada A. McGowan
Thomas R. Henderson
Robert M. Campbell

1884.

Rosaline McD. McLea
Octavia G. Ritchie
John L. Day
Charles R. Hamilton
Henri G. Joly
James E. Le Rossignol
Charles B. Gordon
Charles J. F. Martin
Helen R. Y. Reid
Wm. C. G. Heneker
Edward A. Robertson
Mary E. E. Hunt
Charles C. Smith
Alice J. Murray
Jessie W. Stewart
F. H. Pickel
George R. Kinloch
Emily C. Forbes
W. Archibald H. Kerr
George Lyman
Alexander M. Jeffrey
Lillias S. Molson
Hattie W. Bennett
John Paterson
Robert H. Reid
Edmund H. Duval
Walter L. Jamieson
Reginald D. Dyer

1885.

George M. Edwards
William Robertson
Ada V. Alexander
Walter Binmore
Frank S. Meighen
Harold B. D. Campbell
David Grant
Maude E. Abbott
John W. Ross
David D. J. White
Mabel N. Evans
Edgar A. Grafton
Elizabeth M. Cochrane
Caroline H. Marshall
Ellen M. H. Stevens
Kate M. Bott
Alexander W. Walters
William M. Birks
Victor C. Buchanan
Minnie M. Howe
Clara F. M. Davidson
Walter D. Macfarlane
Thos. R. McInnes
Mary H. Henderson
Maude S. Gibsone
Robert H. Berwick
Janie T. Black
Eleanor McD. Campbell
John H. Dunlop
Annie M. Kyle

1886

Annie Williams
Albert G. Nicholls
Albert F. Winn
Percy N. Evans
A. Armour Robertson
Sara B. Scott
Thomas B. Reed
Hugh M. Kinghorn
James B. Mitchell
Inez H. R. Botterell
George W. Mooney
Sydney L. N. Ussher
Edward C. Trenholme
Jeannie T. Botterell
Peers M. Davidson
Harry R. Jamieson

1886.

M. Mira Macfarlane
Frederick M. Fry
Henry Lemesurier
Arthur J. Whitham
George H. Mathewson
Lizzie B. McGregor
Levi Moore
Helen R. Day
Walter E. Cushing
William Monk
Gerald F. Hibbard
Mary E. Bond
Persis J. Lothrop
Florence B. Pangman
Frederick A. Fothergill

JUNIOR CERTIFICATES.

1875.

Charles F. Dawson
William C. Norris
William S. Kerry
Frank D. Adams

1876.

William R. Robertson

1877.

Annie Cusack
Lizzie Cox
Ella Gardiner
Elizabeth Monk
Jessie Logan
Alexander W. Richardson

1878.

George Ross
David McKinnon
Jane Wood
Annie Troup
Jennie Edgar
Edwin W. Griffin
Mary Troup
Herbert R. Macaulay
Jessie Stewart
Alexander Ambrose
Milton Vandewater
Mulie Somerville
Maggie Osgood
Fritz G. Gnaedinger
Robert A. Elliott
Dora Scott
Frederick F. Kingston
William H. Adams.

1879.

Margaret McCoy
Ida Sutherland
Hattie Dally
Grace Darling
Margaret Wilson
Augusta Pederson
George Corey Thomson
Georgina Iles
Mary Mitchell
Arthur Mercer

1880.

Jessie S. Greenshields
William Graham
Bertha Savage
Ellie M. Cole
David Ogilvie
Jeannie Ross
Lorrie Dickson

1881

Annie B. Barr
Agnes H. Fairbairn
John S. Cassils
Martha Martin
Mary C. Greer
Jeannie Dickson
Ernest Allard
Nellie Hall

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Henry Allen
J. W. H. Milne

1882.

Cora Comfort
William F. Graham
Annie Munro
Daniel Taylor

1883.

John Coon
Albert E. Botterell
Annie Murphy
E. Herbert Stafford
Lucie E. Ives

1884.

Francis H. Hadley
Arthur L. Crawford
Alexander F. Mitchell
Frederick A. Stabb
Minnie M. Howe

1885.

Isabel M. M. Campbell
Margaret Murchie

1886.

Richard McBride.

STANDING IN THE EXAMINATIONS, 1887.

ASSOCIATES IN ARTS.

I. Candidates under 18 years of age, in order of merit.

No.			
8.	*Walter J. LeRossignol (High School, Montreal),	1245	Marks.
10.	*J. Murray McGregor (High School, Montreal),	1226	"
22.	†E. Albert Stone (High School, Montreal),	1184	"
31.	Florence S. Day (Girls' High School, Montreal),	1176	"
1.	*Edward W. Archibald (High School, Montreal),	1147	"
29.	‡Katherine M. Campbell (Girls' High School, Montreal),	1095	"
24.	†Henry H. Walker (High School, Montreal),	1093	"
19.	†Wilfrid V. Lucas (High School, Montreal),	1017	"
12.	*Wilfrid J. Mitchell (High School, Montreal),	998	"
9.	*Gordon W. McDougall (High School, Montreal),	996	"
49.	†George B. McLeod (Bishop's College School, Lennoxville),	985	"
4.	*Arthur A. Cole (High School, Montreal),	971	"
7.	*Arthur R. Holden (High School, Montreal),	948	"
26.	†Hugh Russell (High School, Montreal),	943	"
28.	Hildagarde F. Beard (Girls' High School, Montreal),	928	"
13.	*John Tees (High School, Montreal),	926	"
52.	*Somerled L. Paterson (Bishop's College School, Lennoxville),	924	"
55.	*Pemberton Smith (Bishop's College School, Lennoxville),	915	"
21.	†Nicholas Shearly (High School, Montreal),	876	"
57.	‡Georgina L. Smith (Mrs. Watson's School, Montreal),	871	"
27.	Jeanie F. Baillie (Girls' High School, Montreal),	equal. 864	"
33.	‡Agnes S. James (Girls' High School, Montreal),		
34.	Amanda B. Krusé (Girls' High School, Montreal),	837	"
32.	Margaretta L. Finley (Girls' High School, Montreal),	830	"
39.	Maude A. Robinson (Girls' High School, Montreal),	823	"
37.	‡Louise S. Mewhort (Girls' High School, Montreal),	789	"
18.	†Ernest R. Ebbitt (High School, Montreal),	785	"
20.	†Percy H. Middleton (High School, Montreal),	776	"
80.	*Harry E. Smith (Waterloo Academy),	768	"
56.	†Bowyer S. Smith (Bishop's College School, Lennoxville),	723	"
14.	†Clement B. Wright (High School, Montreal),	719	"
110.	*R. H. Barron (Lachute Academy),	718	"
53.	*Carlisle T. Pemberton (Bishop's Col. School, Len'ville),	eq. 714	"
85.	*James F. Warne (Stanstead Wesleyan College),		
101.	*William Oliver (Huntingdon Academy),		
54.	†George C. Smith (Bishop's College School, Lennoxville),	701	"

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58. May L. Cutting (Private Tuition), 668 Marks.
59. Lucy Pomeroy (Compton Ladies' College), 608 "
35. Grace C. Lamplough (Girls' High School, Montreal), 604 "
23. †Westley A. Tester (High School, Montreal), 600 "
38. A. Constance Richardson (Girls' High School, Montreal), 581 "
115. ‡Maggie E. Barron (Lachute Academy), } eq. 547 "
82. *John H. McAlpine (Stanstead Wesleyan College), }
6. William T. H. Ellicott (High School, Montreal), 528 "

II. Candidates over 18 *years of age.*

119. ‡Julia Armstrong (Lachute Academy).
100. *James Bennie (Huntingdon Academy).
76. *Simon B. Blunt (Waterloo Academy).
2. *Percy K. Brown (High School, Montreal).
102. *Merrill Cooper (Huntingdon Academy).
64. *John Dresser (St. Francis College School).
62. *Albert H. Farnsworth (St. Francis College School).
86. *Erastus E. Howard (Inverness Academy).
87. *Newton Kerr (Inverness Academy).
79. *Simeon Martin (Waterloo Academy).
50. †Thomas E. Montgomery (Bishop's College School, Lennoxville).
4. Caroline J. Mooney (Girls' High School, Montreal).
42. May G. Murphy (Girls' High School, Montreal).
78. *Frank D. Parmelee (Waterloo Academy).
106. *Archie Reeves (Huntingdon Academy).
63. *William D. Reid (St. Francis College School).
118. ‡Maggie Shepherd (Lachute Academy).
77. *Myran E. Thomas (Waterloo Academy).
104. *William Walsh (Huntingdon Academy).

JUNIOR CERTIFICATES.

45. Henry E. Burstall (Bishop's College School, Lennoxville), 698 Marks.
75. Addé Wells (Waterloo Academy), 689 "
83. Howard Honeyman (Stanstead Wesleyan College), 681 "
91. George White (St. Francis College School), 670 "
81. Paul H. Knowlton (Waterloo Academy), 653 "
107. John Gleason (Cowansville Academy), 642 "
11. D. Norman MacVicar (High School, Montreal), 638 "
60 Susan Carter (Compton Ladies' College), 584 "
65. Nina M. Pickle (Knowlton Academy), 552 "

*May, without further examination, matriculate in Arts or Applied Science.
† Do in Applied Science, only.
‡ Do in Arts (McGill).

STANDING IN THE SEVERAL SUBJECTS.

[The numbers correspond with those in the preceding list. Candidates whose numbers are in parentheses are equal in standing. Those preceding an asterisk have obtained at least two-thirds of the marks, those following at least one-third. Numbers 1-26 are from the Montreal High School; 27-42 from the Girls' High School, Montreal; 45-56 from Bishop's College School, Lennoxville; 57 from Mrs. Watson's School, Montreal; 58 private tuition; 59, 60 from Compton Ladies' College; 61-64 and 88-93 from St. Francis College School, Richmond; 65-67 and 109 from Knowlton Academy; 68-74 from Côte St. Antoine Academy; 75-81 from Waterloo Academy, 82-85 from Stanstead Wesleyan College; 86, 87 from Inverness Academy; 100-106 from Huntingdon Academy; 107, 108 from Cowansville Academy; 110-119 from Lachute Academy.]

I. *Preliminary.*

Reading.—[At Montreal.—32, (4, 31, 35, 42), (8, 10, 19, 27, 38), (1, 9, 41, 57), (6, 28, 33, 37, 39), (24, 26, 29, 30, 34), 2, (3, 7, 11, 12, 13, 14, 17, 18, 20, 21, 22, 23, 40)]. [At Lennoxville.—(49, 53), (51, 55), (54, 56), (50, 52), (45, 47), 46, 48]. [At Inverness.—87, 86]. [At Compton.—60, 59.] [At Côte St. Antoine.—(72, 73), (69, 71), (68, 74), 70]. [At Coaticook.—58]. [At Lachute.—119, (115, 118), 117, 110, 114, 112, 116, 111, 113]. [At Knowlton.—65, 66, 67, 109]. [At Cowansville.—(107, 108)]. [At Richmond.—63, (61, 88), 91, (62, 64), 92, 89, 90.] [At Waterloo.—80, 79, 81, (75, 78), 76, 77]. [At Huntingdon.—(100, 106), 101, 102, 104, (105, 103)].

Dictation.—(10, 19, 24, 29, 50, 55, 56), (7, 9, 31, 32, 33, 57, 77, 106), (1, 8, 35, 46, 52, 53, 54, 68, 79, 81, 105), (2, 14, 60, 64, 88, 100, 110, 119), (12, 13, 21, 22, 26, 28, 30, 34, 36, 37, 38, 39, 45, 49, 61, 69, 72, 86, 112), (3, 41, 65, 75, 80, 85, 87, 91, 107, 118), (6, 11, 42, 59, 63, 71, 76, 101, 102, 109, 117), (18, 74, 78, 83), (4, 20, 47, 48, 114, 115, 116), (23, 40), (27, 58, 70), (51, 62, 73, 93), (66, 82, 104, 108, 111)*.

English Grammar.—(8, 39, 52, 55), (7, 42, 49), (11, 22), 19, (41, 51, 86), (2, 14, 24, 27, 50, 53, 106), (10, 45, 54), (1, 12, 36, 40, 57, 91), (34, 108), (28, 46), (30, 31, 56), (4, 13, 33, 37, 119), (26, 38, 59, 101, 118), (3, 21, 29, 62, 87), (9, 32, 35, 60)*, (18, 47, 64, 75, 79, 83, 85, 103, 105), (23, 61, 63, 115), 116, (58, 78, 84, 102, 104, 109, 117), (17, 111), (20, 81, 107), (6, 68, 76, 88, 89, 100), (65, 80, 92, 110, 114), (69, 72, 77), (48, 93), 82, 90, 66, (71, 74).

Arithmetic.—(8, 10, 55, 86, 88, 100), (91, 101), 85, 7, 63, 64, (2, 22, 24, 50, 57, 77, 79, 106, 115, 116, 118, 119), (36, 37, 45, 87), (12, 31, 38, 62, 82), 41, (21, 29, 49, 58, 61, 78, 80, 110, 112), 26, (13, 107), (54, 56, 76), (4, 14, 19, 90), (83, 92), (9, 111), (34, 51), (20, 46)*, (33, 47), (42, 60), (28, 81), (84, 117), (11, 27, 102), (1, 59, 68, 103, 104, 114), (35, 65, 89), 108, 17, (23, 75), 18, (3, 69), 52, 40, 105, 67, (32, 48), (6, 30, 39), (53, 71, 72).

Geography.—(8, 10), 2, 9, (1, 12), (22, 86), 52, 4, (77, 79, 106), (7, 13, 20, 80, 81), 26, (14, 19, 49, 59), (21, 27, 64, 78), (55, 76, 84, 87)*, (28, 41, 58, 62, 82, 108), 60, (24, 29, 31, 42, 91, 110, 111), 36, (3, 32, 33, 57, 104), (50, 54, 75), (11, 51, 53, 102, 107, 112, 115, 119), (23, 38, 56, 63, 101), (6, 39, 68, 117, 118), (37, 61, 65, 85, 90, 100, 114), (46, 83, 88), (18, 45), 30, (48, 69, 105, 109), (34, 35, 67).

British and Canadian History.—(22, 100, 106), (31, 86), (8, 10, 37), (24, 26, 28, 41)*, (29, 81), (32, 42, 49, 56), (12, 38, 52, 79, 101), (19, 39, 60, 77, 78, 115), (33, 83), (1, 2, 34), (9, 55, 76, 87 102, 116), (27, 54, 62), (14, 20, 35, 45, 53, 57, 58), (7, 50, 64, 82, 85, 91, 118, 119), (4, 18, 21, 59, 80, 84), 23, (75, 107), (11, 63), (13, 104), 6, 65, 110, 117).

Gospels.—[Creditable answering, in order of numbers.]—1, 2, 4, 8, 9, 10, 14, 18, 19, 21, 22, 27, 28, 29, 31, 32, 33, 34, 35, 36, 38, 39, 41, 42, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 61, 62, 63 64, 69, 75, 77, 79, 80, 81, 82, 83, 84, 85, 86, 87, 92, 104, 106, 112, 115, 117, 118, 119*.

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II. *Optional.*

Latin (Ordinary).—106, 86*, 79, 85, 75, 77, 76, 80, (62, 78, 82), 100, (84, 105), 87, 101, 72, 83, 110, 115, 64, 91, 63, (102, 119), (63, 108, 118), (104, 116), (61, 69, 107).

Latin (Advanced).—8, (1, 10), (9, 29)*, (7, 52), (2, 57), 12, 49, 56, 13, 33, 53, 6, 14, 55, 37, 50, 4.

Greek (Ordinary).—106, 108, 86, 87, 62*, 64, 107, 93, (75, 79), 77, (80, 105), 101, (76, 78), 100, 83, 88, (82, 85, 110), 102, 103, 119, (61, 63), (84, 91), (90, 104, 118).

Greek (Advanced).—1, 10, 8*, 2, 9, 4, 12, 7, 13, 6, 52, 55, 53.

French.—55, 10, 54, 106, 53, 29, (2, 50, 57), 8, (49, 52), (31, 46), (1, 19, 45), 7, (64, 83), (32, 39), 27, (9, 51, 107), (4, 58, 80, 86)*, (21, 38, 77, 79), 75, (11, 78, 85), (41, 42, 56, 63, 91), (22, 110), 100, 59, (29, 34, 103), 68, (12, 14, 60), 105, (76, 115), 62, (18, 37, 72, 119), (81, 87, 101), 13, 28, 35, 30, (71, 112), 104, (6, 61), (33, 116), 26, (48, 84), (65, 102, 118.)

German.—41, 31, 34, (19, 42), 22, 24, 32, 28, 39, 18, 35*, 26, 30, (23, 27), 20, 21, 17, 40.

Geometry.—(10, 22, 31, 52, 55, 75, 80, 81, 86), (4, 8, 12, 21, 91, 106), (20, 24, 41), (7, 92), (14, 84), (1, 26, 65, 79), (9, 13, 83), 2, 108, (62, 76, 87, 110), (17, 45, 59, 78), 23, (29, 51, 54, 119), (102, 105), 19, (53, 85), (18, 33, 64), (47, 63), (39, 77, 90, 100, 101)*, 11, (49, 118), 89, 107, (57, 58), 56, (50, 104), (27, 68, 112), 82, 28, 38, 61, (3, 69), (37, 42, 72, 103, 113, 115).

Algebra.—107, (1, 3, 22, 52, 103), (7, 12, 49, 104), (8, 10, 55, 63), (13, 34, 75, 81), (2, 26, 83, 86, 102, 106), (4, 62, 76), 101, (45, 103), (21, 61, 79, 100), 118, (29, 33, 65, 77), (18, 24, 60), (20, 39, 59, 56, 85, 87), (19, 31, 78), (32, 37, 41), (57, 80), 9, 116, (38, 92), 28, (82, 110), (69, 84), (27, 64), 119, (17, 30, 91), 11, 14, (42, 105, 109)*, 58, 117, 54, 112, 115, 111, 59, 53, (6, 90), 23, 114, 89, (46, 47), (66, 113), 35, (38, 40).

Trigonometry.—(1, 8, 22), (24, 31), (4, 29), 39, 41, 10*, 28, 37, (12, 19, 30, 49), (2, 13), (9, 20), (17, 27), (21, 40), 33, (11, 26, 32, 34).

Natural Philosophy.—58.

Geometrical and Freehaud Drawing.—31, 20, 22, 29, 41, 21, 27, 24, 65, 35, (18, 33), 17, 34, (26, 49), 19, 28.

English Language.—10, 28, 31, 29, 42, 32, (2, 8), 41, 1, 39, 37, (33, 34), 27, 30.

English Literature.—29, 31, (32, 33), 38, 23, (1, 34, 41), 8, 57, 10, (60, 86), (2, 19, 35), 9, (24, 26), 13, 22, (7, 20), 18, (4, 14, 27, 42), 11, (12, 21, 30), (23, 55, 76), (49, 79)*, 37, 47, 54, 59, (17, 53), 50, (6, 45, 80), 62, (68, 77), 46, (52, 81), (39, 50), 63, (3, 70), 85, 51, 64, 72, 56, 40, 84, 82, 83, 87, 48.

Special Paper.—110, (111, 118, 119), 100, 116, 104, 115, 101, (102, 106), 105, (113, 114).

History.—8*, 1, 22, 29, 41, 9, 26, (2, 10, 39, 42), (28, 37), 27, 24, 13, 33, (12, 19), 38, 4, 52, 54, 105, 56, (23, 49), (34, 85, 102).

Geography.—49, 8, 2, 10, 9, 45, 57, (7, 22, 54, 55), (12, 19), 4*, (50, 56, 87), (11, 13, 47), (26, 77), (18, 52), (24, 51), 23, 60, (14, 53), (21, 106), (6, 62), (48, 69), (64, 90), (1, 46, 53, 107, 111), (61, 63), 91, (76), 20, (3, 119), (79, 112), (99, 80, 104, 115), (73, 103, 118), (75, 101, 116), 81, (38, 92, 65, 100, 110), 59, 114, 113, (102, 109, 117), (68, 105), (71, 73).

Botany.—22, 30, (29, 32), 28, (31, 35), 27, 34, (26, 42)*, 19, 36, (24, 37, 41), 18, 52, 20, 40, 33, 21, 38, 17, 60, 59, 82.

Chemistry.—29, 24, 31, 22*, 19, 49, 26, (32, 42), 41, 17, 20, 35.

Zoology.—57*.

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Sir William Dawson	The Fishery Industries of the United States, 2, 4to volumes. The Natural History of New York, vol. 5, Lamellibranchiata.
Smithsonian Institution	Report of the Institution for 1883.
Graduates' Society	An Anglo-Saxon Dictionary, parts 1 and 2.
G. L. Harrison, LL.D., Philadelphia	Legislation on Insanity, Lunacy Laws of the United States and Canada.
Hon. Robert Mackay	J. S Mill, Principles of Political Economy, and a System of Logic ; 2 vols.
Institute of Civil Engineers, London	Minutes of the Proceedings of, vol. 84, for 1885-86.
Society of Engineers, London	Transactions of, for the year 1885
Hon. J. Blanchet, Quebec	Second volume of the Jugements et Délibérations du Conseil Souverain de la Nouvelle-France.
Dominion Government, Ottawa	Reports of the Canadian Archives, by Douglas Brymner, Esq., 1881 to 1885.
Robert Muir	A Collection of Tracts Relating to the American Revolution, 1765 to 1780, Ten vols.
Sir William Dawson	Kinns, Moses and Geology. Official Catalogue, Canada, Colonial Exhibition, London. American A. A. Science, Transactions of, 34th Meeting at Ann Arbor, 1885. Robertson, High School Algebra, Part I. Report 3rd Geographical Congress held at Venice, 1881. Monograph, No. IX., United States Geological Survey. Bulletins of the United States Geological Survey, Nos. 27, 28 and 29. Geological Survey of New Jersey, vol. I., by Geo. H. Cook. Commissioners' Report, 1883, United States Fisheries Commission.
W. McLennan	Songs of Old Canada.
Jeffrey Burland	Burgh, Boilers and Boiler Making, Practically Considered. R. Scott Burn, Modern Mechanical Engineering, 2 vols.
Trustees of the British Museum	Catalogue of all the maps, plans and charts in the British museum, two volumes. Catalogues of books in the galleries of the British museum. An Introduction to the Study of Meteorites. Catalogue of birds in the British museum, Vol. XI. Catalogue of fossil mammalia in the British museum, Vol. III. Catalogue of Lepidoptera Heterocera in the British museum, Vol. VI.

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Hon. Robert Mackay	Alphonzo de Ligorio, Theologia Moralis, six volumes.
Law Society, Toronto	Catalogue of books in the Library of the Law Society of Upper Canada, Toronto.
Council of Owen's College	First volume of Studies in Biology.
American Institute of Mining Engineers	Transactions of. Vol. XIV.
Institution of Civil Engineers, London	Minutes of the Proceedings of, Vol. LXXXVI. Part III.
Royal Society of London	The Philosophical Transactions of, Vol. 176, Parts I. and II.
United States Government	Census of 1881, Vol. XVI. Water Power of the United States, Vol. XX. Statistics of Wages, 2 volumes.
Secretary of State for the Colonies	Scientific Results of the Voyage of H. M. S. Challenger, Vol. XIV. of Zoology.
Meteorological office, London	Observations of the Polar expedition at Fort Rae, 1882 and 1883.
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Sir William Dawson	R. Angus Smith, A Centenary of Science in Manchester. Radcliffe, A new chapter in the Story of Nature.
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Total, 83 volumes.	
Chas. Drinkwater	Reports of the C. P. R. for 1883-84-85.
Institution of Engineers and Shipbuilders of Glasgow	Transactions of, Vol. XXIX. for 1886.
American Society Mechanical Engineers	Transactions of the, Vol. VII., for 1885.
Institution of Civil Engineers, London	Minutes of and Proceedings of the, Vol. LXXXVII., for 1886.
Zoological Society, London	Transactions of and the Proceedings of, for 1886.
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Grant, Bush Life in Queensland, 2 vols.
Holland, Intellectual Liberty.
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Howe, Margaret Fuller.
Hally, Retrospect of a Long Life.
Hawcis, American Humorists.
Harvey, History of Newfoundland.
Hughes, Among the Sons of Hun.
Hare, Walks in London, 2 vols.
Hill, Col. Gordon in Africa..
Hall, Memoirs of Great Men
Jackson, The French Court, 2 vols.
James, The British in India.
Kebble, Earl Beaconsfield, 2 vols.
Keane, Six Months in Morocco.
Lang, History of Russia, 2 vols.
Emigrant Letters from Manitoba.
Lane, Arabian Nights.
Lee, Euphorion, 2 vols.
Lambert, Voyage of the Wanderer.
De Ramusat, Letters of Madame.
Macdowall, Asgard and the Gods.
Macquoid, The Ardennes.
Marie von Thilo, Buried Alive.
Markham, A Polar Reconnaissance.
Merrill, East of Jordan.
Maurice, Life of F D. Maurice, 2 vols.
Miles, Stock Breeding.
Nordenskiold, Voyage of the Vega, 2 vols.
Payne, Voyages of Elizabethan Voyagers.
Paget, Crimean Journal.
Phillipps' English Literature, 2 vols.
Parker, A Naval Officer.
Rimmer, About England with Dickens.
Smalley, The Northern Pacific Railway.
Schuyler, Life of Peter the Great, 2 vols.
Schliemann, Tiryus.
Sinden, A Walk in Hellas.
Sanderson, Among Wild Beasts.
Stevens, Madame De Stael, 2 vols.
Storrs, The Divine Origin of Christianity.
Stanley, The Congo, 2 vols.
Spedding, Evenings with a Reviewer, 2 vols.
Smith, Life of Lord Lawrence, 2 vols.
Stoughton, Penn., the Founder of Pennsylvania.

McGill College Book Club -Continued....	Temple, Men of My Time in India. Trotter, Our Mission to Morocco. Taylor, The Alphabet. 2 vols. Tomasson, The Irregulars in the Transvaal. Vincent, Norsk, Lapp and Finn. Wilson, Egypt of the Past. Woolley, Savage Savenetia, 2 vols. Walker, Life of the Rev. John Skinner. Warner, A Roundabout Journey. Young, Catherine of Arragon, 2 vols. Total, 127 volumes.
Norwegian Government.....	The Norwegian North Atlantic Expedition, 1876-78, Parts XV. and XVI., crustacea and mollusca.
Sir William Dawson.....	Josiah Mason, A Biography by J. T. Bunce. Report of Commissioner Fish and Fisheries, Part 12 for 1884.
Astronomer Royal.....	Astronomical, Magnetic and Meteorological Observations for 1884, Greenwich. Cape Meredian Observations, 1879 to 1881. Observations of the Great Comet, 1882. Vol. II., Part I.
McGill Graduates' Society.....	Sowerby's English Botany. Twelve volumes
Her Majesty's Secretary of State for the Colonies.....	Scientific Results of the Cruise of H. M. S. Challenger. Vols. XV. and XVI. Zoology.
Zoological Society.....	Proceedings of the, for 1886, Part III.
Royal Institute British Architects	Transactions of the, for 1885-6. Vol. II. of Second Series.
Smithsonian Institution.....	Report for 1884, 2 vols.
Geological Survey of Canada.....	The Annual Report for 1885.
Hon. R. Mackay.....	Henry the VIII., Assertio Septem Sacramentorum, Rome, 1543.
New Shakespeare Society.....	The Digby Mysteries. Shakespeare's Centurie of Praise.
Montreal City Council.....	The Civic Reports for the year of 1885.
United States Government.....	Educational Reports, Exhibits at the New Orleans Centennial Exposition, Parts I., II. and III.
Dr. G. M. Dawson.....	The Canadian Rocky Mountains.
Peter Redpath, Esq	Calendars of State Papers and Chronicles, etc., of England, Scotland and Ireland, 27 vols. Scientific Results of the Cruise of H.M.S. Challenger, 12 vols. Hakluyt Society's Publications, 5 vols. The Annual Register for 1883-84, 2 vols. Surtee's Society's Publications, 1 vol. The New Club Series, 8 vols. Reports of the Royal Commission on Historical MSS., 8 vols. Oxford Historical Society's Publication, 4 vols. Murray's New English Dictionary, 2 vols. 69 volumes.
The Geological Survey of Canada.....	Macoun, Catalogue of Canadian Plants.
Prof. H. T. Bovey.....	Portfolio of Photographs of the Worthington Pumping Machinery.
Sir William Dawson.....	Handbook of Zoology. United States Survey, Lake Lahoutan. Proceedings A. A. A. S., Thirty-Fifth Meeting held at Buffalo, N.Y., 1886.
Burland Lithographic Company.....	The Canadian Magazine of Science and Arts for 1883 to date, 4 vols.
Dr. A. Johnston.....	Wentworth, Elements of Analytic Geometry.
Institute of Civil Engineers.....	Minutes of Proceedings of the Institute, Vol. 87, for 1886-87.

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Hon. Justice Mackay	The Revised Statutes of Canada, 2 volumes, 1887.
	Bractou, De Legibus et Consuetudinibus Angliæ.
United States Government	The Coast and Geodetic Surveys for 1885.
	The Mineral Resources of the Western States.
	Census of 1880, Vol. XV.
	Report of Mining Industries.
	Annual Report for 1885 of the Chief Signal Officer.
	Circulars of Education, Nos. 1 and 2 for 1886.
J. P. Kimball	Production of the Precious Metals in the United States for 1883, '84 and '85.
	Annual Reports of the Director of the Mint for 1880 to 1886, 7 vols.
The Right Hon. the Earl of Cavan	The Englishman's Bible, 6 vols.
Dr. G. M. Dawson	On Certain Borings in Manitoba.
John G. Bourinot	Local Government in Canada.
The Trustees, British Museum	Subject Index of Modern Works.
	Catalogue of Chinese and Japan Paintings.
	Catalogue of Bengali Books.
	Cata ogue of Greek Coins.
	Guides to Exhibition Galleries.
	Mirrored Saloon, Mausoleum Room.
	Sculptures of the Parthenon.
Dr. E. J. Nolan, Philadelphia	Proceedings of the Academy of Natural Sciences, Philadelphia, 9 vols.
Imperial University, Tokio, Japan	Journal of the College of Science.
	Memoirs of the Literary College.
W. H. Winchell	The American Geologist, 13th and 14th Minneapolis.
Cambridge Philosophical Society	Transactions of ——, Vol. XIV., Part 2.
	Cambridge, 1887, 4to.
Aberdeen University	Annual Calendar for the Session, 1887-88.
Nova Scotia Government	Report on Education for 1886, Halifax.
New Brunswick Government	Report on Education for 1886, Fredericton.
Quebec Government	Report on Education for 1886.
Ontario Government	Report on Education for 1886.
Senatus Academicus, Aberdeen	Annual Calendar of the Aberdeen University for 1887-88.
Quebec Government	Journals of the Legislative Assembly.
	Journal of the Legislative Council.
Eugène Lafleur, Esq	Les Ouivres de Condillac, 21 vols.
Engineers Society, London	Transactions of, for 1886, 1 vol.
Inst. of Civil Engineers, London	Transactions, of for 1886, 1 vol.
The Hon. The Secretary of State for the Colonies	Scientific Reports.
	Voyage of H. M. S. "Challenger," Vols. 18 and 19, 2 vols.
Royal Society of Canada	Transactions of, Vol. IV. for 1886, 1 vol.
Graduates' Society	The Works of Emerson, 11 vols.
	Nova Britannia, by Morris, 1 vol.
	Pichon, History of Cape Breton, 1 vol.
	Bouchette, Topographical Dictionary of Canada, 1 vol.
	Edwards, The history of the West Indies, 2 vols.
Total 16 vols	
Rev. F. Frothingham	Harris, Game and Wild Animals of South Africa, 1 vol., folio,
	Fisher, Ancient Allegorical Paintings in Trinity Chapel, 1 vol. folio. Stratford, upon Avon, 2 vols.
Sir J. William Dawson	Monograph of Dinocerata, U. S. Geological Survey, by O. C. Marsh, 1 vol.

TO THE MUSEUM.

Geological Survey of Canada	Model of the Madoc Meteorite.
Botanic Garden, Natal, through the Agassiz Association	Collection of dried plants from Natal.
Committee of the Egypt Exploration Fund	A collection of specimens obtained in the recent excavations at San and Naukratis.
Dr. G. Colquhoun, Iroquois, Ont.	Specimens of rhizoma of pond lily.
Mr. J. G. Bailey, taxidermist, Montreal	Stuffed specimen of song sparrow.
Mr. W. A. Oswald, Belle Rivière, P.Q	Specimen of natural graft and nest of wasp.
Geological Survey, Ottawa, through Dr. G. M. Dawson	Collection of woods from British Columbia.
Mr. Frederick Hague, B.C.L., Montreal	Specimen of fish hawk from Little Metis, P.Q.
Dr. Rankine Dawson	Specimens of fishes and dried plants from India.
Mr. R. Rinfret	Indian hatchet from Portneuf, P.Q.
Lieut.-Col. Grant, Hamilton, Ont	Fossils from the Niagara formation, Hamilt'n
Rev. M. O'Sullivan, B.A.	Specimens of birds, plants and minerals from Jamaica.
Mr. George A. Drummond	Fifty-four mounted specimens of Canadian birds.
Mr. W. F. Ferrier, Montreal	Specimens of Stromatopora and Archæopteris. Specimens of slickenside from Point Levis. Specimen of beryl and associated minerals from township of Maisonneuve, P.Q.
Mr. Charles Robb, C.E., Montreal	Specimen of greenockite. Specimens of samarskite and muscovite from Maisonneuve, P.Q.
Mr. Chas. Gibb, B.A., Abbottsford, P.Q.	Sponge from Bahamas.
Mr. G. Woodbridge, Ohio, per Hon. F. W. Torrance	Specimen of white oak, showing 401 annual rings.
Royal Gardens, Kew	Large collection of economic vegetable products, embracing textile fibres, resins, dyes, medicinal products, etc., chiefly from India.
Mr. John Murray, F.R.S., London, Eng.	Selection of soundings from the "Challenger Expedition."
Mr. Richard White, Montreal.	Tamarac water pipe from St. Paul street aqueduct, in use for a period of eighty years.
Mr. J. Armstrong, Montreal	Specimen of snake ("Lance de Fer,") from island of St. Lucia, W.I.
Mr. James Walsh, Ormstown, P.Q.	Specimen of Indian pottery from Manitoba.
Mr. E. H. Hamilton, B.A.Sc., Montreal	Specimens of Cetraria, from the Selkirk Mountains, British Columbia.
Geological Survey, Ottawa, through Prof. Macoun	Two collections of Canadian plants.
Dr. T. Wesley Mills, Montreal	Marine invertebrates from the Bahamas.
Dr. B. J. Harrington, Montreal	Specimen of Gorgonia from Florida.
Mr. W. S. Patterson	Specimens of sands from Charleston.
Mr. C. Wintle	Specimen of garter snake.
Mrs. W. B. Dawson, Montreal	Specimens of corals from Barbadoes.

TO THE APPARATUS.

Mr. Jeffrey H. Burland, B.A., Sc	A Polariscope made by Laurent, of Paris.

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McGill Normal School.

1887–88.

Government of the School.

Under the Regulations for the establishment of Normal Schools n the Province of Quebec, the Superintendent of Public Instruction is empowered to associate with himself for the direction of one of these Schools the Corporation of McGill University, Montreal. In accordance with this arrangement the Provincial Protestant Normal School is affiliated with the McGill University, and the following members of the Corporation of the University constitute the Committee of the Normal School for the Session of 1887–88.

NORMAL SCHOOL COMMITTEE.

Sir Wm. Dawson, LL.D., F.R.S., Vice-Chancellor of the University, *Chairman*.

Hon. James Ferrier, Senator.
Mr. Samuel Finley. } Governors of McGill College.

Rev. George Cornish, LL.D.
J. R. Dougall, M.A. } Fellows of McGill University.

William Craig Baynes, B.A., *Secretary*.

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OFFICERS OF INSTRUCTION.

McGILL NORMAL SCHOOL.

Emeritus Principal and Associate Professor:

WILLIAM HENRY HICKS, ESQ.

SAMPSON PAUL ROBINS, M.A., LL.D., *Principal and Ordinary Professor of English Language and Literature, and Lecturer on Art of Teaching and Natural Science.*

JAMES McGREGOR, M.A., LL.D., *Ordinary Professor of Mathematics and Instructor in Classics.*

MADAME SOPHIE CORNU, *Professor of French.*

MR. R. J. FOWLER, *Instructor in Music.*

MR. JOHN ANDREW, *Instructor in Elocution.*

MISS GREEN, *Instructor in Drawing.*

MISS ROBINS, *Assistant to the Principal.*

MODEL SCHOOLS OF THE McGILL NORMAL SCHOOL.

MR. GEORGE PARMELEE, *Head Master of Boys' School.*

MISS JANE A. SWALLOW, *Head Mistress of Girls' School.*

MISS LUCY H. DERICK, *Head Mistress of Primary School.*

ANNOUNCEMENT FOR THE SESSION 1887–88.

This institution is intended to give a thorough training to teachers, especially for the Protestant population of the Province of Quebec. This end is attained by instruction and training in the Normal School itself, and by practice in the Model Schools; and the arrangements are of such a character as to afford the greatest possible facilities to Students from all parts of the Province.

The thirty-second Session of this school will commence on the first of September, 1887, and close on the thirty-first of May, 1888. The complete course of study extends over three years, and the Students are graded as follows:—

1. *Elementary School Class.*—Studying for the Elementary School Diploma.
2. *Model School Class.*—Studying for the Model School Diploma.
3. *Academy Class.*—Studying for the Academy Diploma.

1. Conditions of Admission and of Obtaining Diplomas.

Candidates for admission into the Elementary School Class will be required to pass an examination in Reading, Writing, the elements of Grammar, Arithmetic and Geography; and to produce the certificate and sign the application referred to in Articles 1 and 2 of the Regulations. Admission into each of the higher classes requires a knowledge of the subjects of the previous one.

Those admitted to the Elementary School Class at the beginning of the Session must be able to parse correctly a simple English sentence; must know the continents, greater islands, peninsulas, and mountains, the oceans, seas, larger gulfs, bays, straits, lakes and rivers, and the chief political divisions and most important cities of the world, must write neatly a dictation from any school reader, with no more than five per cent. of mistakes in spelling, in the use of capitals, and

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in the division of words into syllables; and must be able to work correctly examples in the simple rules of Arithmetic and in fractions.

Associates in Arts of the Universities, of the requisite age, may be admitted into the Elementary School Class, and, provided that they have passed in Geometry, Algebra and French, into the Model School Class, without examination.

In the examinations for entrance into the Academy Class, the Principal may allow exemptions to Associates in Arts for the subjects in which at the examinations for that certificate they have passed with credit.

Each Student must produce a certificate of good moral character from the clergyman or minister of religion under whose charge he has last been, and also testimony that he has attained the age of sixteen years. He will also be required to sign a pledge to teach for three years in some public school in the Province of Quebec.

Candidates for admission will be furnished with forms of application on communicating with the Principal of the School.

There will be a Semi-sessional Examination at Christmas, which all Students are required to pass in order to continue in the Classes.

At the close of the first year of study Students may apply for examination for diplomas giving the right to teach in Elementary Schools; and after two years' study, or if found qualified at the close of the first year, they will, on examination, be entitled to diplomas as teachers of Model Schools.

Students having passed the examination for the Model School Diploma, with creditable marks in Classics and Mathematics, or having otherwise advanced to the requisite knowledge, may go on to the Academy Class, and on examination, may obtain the Academy Diploma.

Students are expected to give their whole time and attention to the work of the School, and are not permitted to engage in any other course of study or business during the sessions of the School.

2. PRIVILEGES OF STUDENTS.

On complying with the above conditions, all Students will be recognized as *Teachers-in-training*, and as such will be entitled to free tuition, and to bursaries in aid of their board and of the cost of text books, not exceeding $36.00 per annum in the two first Classes, nor $80.00 in the Academy Class, should they be successful in obtaining the diploma at the final examination. A portion of this allowance will be advanced to such Students as are not resident in Montreal, on their passing the semi-sessional examination.

Under the regulations subjoined, and with the view of extending the benefits of the School to all parts of the country, those who reside at a distance of more than ninety miles from the city of Montreal will also be entitled to a small allowance for travelling expenses, proportionate to the distance.

Students resident in Montreal may share in the Bursary Fund, on producing certificates from their ministers or clergymen, that such aid is absolutely necessary to their continuing in attendance at the School.

In addition to religious instruction of a general Protestant character by the Professors, arrangements will be made for special religious instruction by ministers representing the several denominations with which the Students may be connected.

No boarding-house is attached to the institution, but every care will be taken to ensure the comfort and good conduct of the Students in private boarding-houses, approved by the Principal. Board can be obtained at from $12 to $16 per month.

The J. C. Wilson Prize of $40 and a Book, contributed by him as a former Student of the School, will be offered for competition to the candidates for the Elementary Diploma, and will be given for the highest aggregate number of marks.

The Prince of Wales Medal and *Prize* will be given to the student taking the highest place in the Model School Class, provided that such student shall attain to the standard fixed by the Regulation of the Council of Public Instruction for this Medal.

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The Marquis of Lansdowne Medal will be given to the student taking the highest place in the Academy class.

It has been resolved by the McGill and Bishop's Universities, and by St. Francis College, Richmond, to accept the Academy course in the Normal School as the equivalent of the first year in their Faculties of Arts, on certain equitable conditions, so that all who have passed satisfactorily through that course are entitled to enter the second year of the courses in Arts without further examination. The McGill University also offers free tuition in the Faculty of Arts in the second year to such students of the Academy Class, not exceeding three in number, as at the final examinations take 75 per cent. of the total marks, with not less than two-thirds of the marks in Latin and in Greek. The same privileges are accorded to male Students by the University of Bishop's College, thus enabling them to obtain the degree of B.A. in two years instead of three. By authority of the Protestant Committee of the Council of Public Instruction, the McGill Normal School is authorized to pay a bursary of $25 to such of its Academy pupils as enter any of the institutions above named, under the provisions here cited, provided they do not take a bursary or exemption from fees, in the institution they enter.

All the preceding regulations and privileges apply to female as well as to male students.

Persons holding the degree of B.A. or M.A., of any British or Canadian University, may receive the Academy diploma, in accordance with the Regulations of the Protestant Committee of the Council of Public Instruction.

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3. Course of Study.

N.B.—The subjoined Course of Study has been designed, and all instruction in it is given, with express reference to the work of teaching.

1. ELEMENTARY SCHOOL CLASS, STUDYING FOR THE ELEMENTARY SCHOOL DIPLOMA.

With the view of accommodating teachers actually in charge of schools at the commencement of the Session, and whose previous

education may enable them to enter at a more advanced period, the course of study in this class is divided into terms, as follows:

FIST TERM, from September 1st to December 3rd.

(*Entrance examination as stated above.*)

English.—The structure of sentences. Orthography and orthoepy. Penmanship. The study of Milton's L'Allegro.

Geography.—General view of continents and oceans. Map of North America.

History.—Outline of general and sacred history.

Arithmetic.—Simple and compound rules.

Algebra.—The elementary rules.

Geometry.—First Book of Euclid to 20th proposition.

French.—Darey's Principes de Grammaire Française to page 50 with verbs of first conjugation.

French History.—Histoire de France to page 60.

French Geography.—Eléments de Géographie Moderne, Amérique.

Chemistry.—Lectures.

Reading and Elocution.

Drawing.—Elements, simple outlines and map drawing.

Music.—Vocal music with part songs. Junior Certificate of Tonic Sol-Fa College.

SECOND TERM, January 6th to end of Session.

No pupils will be received after the commencement of this term. Those who enter must pass the examination of the class in the work detailed above.)

English.—Structure of words and sentences. Etymology, derivation and syntax. Study of Milton's Il Penseroso and of Macaulay's Essay on Milton.

Geography.—Contour, elevations, river systems, political divisions and chief cities of South America and the Old World.

History.—England.

Arithmetic.—Fractions and proportion. Properties of numbers. Mensuration.

Algebra.—Simple equations of one unknown quantity with problems.

Geometry.—First book of Euclid with deductions.

Art of Teaching.—Lectures on the principles of education, especially on those derived from the physical, mental and moral nature of the child.

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French.—Principes de Grammaire Française, page 100, with verbs regular and irregular.

French History.—Histoire de France to page 73.

French Geography.—Europe.

Botany.—Lectures.

Reading and Elocution.

Drawing.—Freehand drawing from the solid and elements of perspective.

Music.—Elements of vocal music and part songs. Elementary Certificate of Tonic Sol-Fa College.

Practice in Teaching in the McGill Model Schools, as directed by the Principal.

Religious Instruction will be given throughout the Session.

In addition to the text-books named above, each student of the Elementary School Class must be provided with an English Grammar, an English History, an Atlas of recent date, an Arithmetic, Todhunter's Algebra, and a Euclid.

2. MODEL SCHOOL CLASS, STUDYING FOR THE MODEL SCHOOL DIPLOMA.

Students entering the school in this second year must have passed a satisfactory examination in the subjects of the Elementary School Class. The Class will pursue its studies throughout the Session, without division into terms.

English.—Principles of grammar and composition. Style. History of the English Language. Study of Shakespeare's Tempest, Poe's Sleeper, and Tennyson's Lotos Eaters.

Geography.—Mathematical and physical. Use of the globes.

History.—Rome, Canada.

Art of Teaching.—Lectures on the principles of education, especially on those derived from the physical, mental and moral nature of the child.

Arithmetic.—Commercial arithmetic and bookkeeping. Logarithms.

Algebra.—Equations of more than one unknown quantity, and quadratics.

Geometry.—Second, third and fourth books of Euclid, with application to mensuration.

Object Lessons.

Latin.—Elements, as in Bryce's 1st Latin Reader.

Greek.—Optional after Christmas to students sufficiently advanced.

French.—Translation from French into English, and from English into French, Darey's Principes de Grammaire Française, Lectures Françaises, Dominion Phrase Book, Canadian History, Abrégé de L'Histoire du Canada par Garneau, French Geography.

Agricultural Science.—Principles, especially chemical and botanical, and application to Canadian agriculture.

Elocution.

Drawing.—Elements of perspective, drawing from the cast and map drawing

Music.—Instrumental music, part songs, and rudiments of harmony. Intermediate Certificate of Tonic Sol-Fa College.

Practice in Teaching.—In the McGill Model Schools, as directed by the Principal.

Religious Instruction throughout the Session.

In addition to text-books named above, each student of the Model School Class must be provided with an English Grammar, a History of Canada, a History of Rome, an Arithmetic, a Todhunter's Algebra, a Euclid, and Dawson's Scientific Agriculture.

3. ACADEMY CLASS, STUDYING FOR THE ACADEMY DIPLOMA.

(*Students entering this Class must have passed a creditable examination in the subjects preparatory to the Course of Study.*)

Logic.—Jevons' Elementary Lessons.

Anglo Saxon.—Sweet's Primer.

Philology.—Lectures.

Mathematics.—Euclid, definitions of Book V. Book VI.; Plane Trigonometry—Galbraith and Haughton.

Latin.—Virgil, Æneid, Book VI., Cicero in Cæcilium, prose composition.

Greek.—Homer Odyssey, Book XXI.

History.—Greece.

French.—Darey's Principes de Grammaire Française, Bonnefon Ecrivain Célèbres, Larousse Cours de Style.

Singing.
Elocution.
Drawing.
Penmanship.
} With the Model School Class.

All pupils of this class, who have not previously done so, must attend lectures on the Art of Teaching in the Elementary and Model School Classes. They must teach in the McGill Model Schools, as directed by the Principal.

In Addition to text-books named above, each student entering the Academy Class must be provided with Greek and Latin Grammars and Dictionaries.

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BY-LAWS OF McGILL NORMAL SCHOOL.

(*Special Regulations for the admission of Teachers-in-Training.*)

Article First.—Any person desirous of being admitted as a Teacher-in-training must apply to the Principal of the Normal School, who, on his producing an extract from the Register of Baptisms, or other evidence, showing that he is full sixteen years of age, with the certificate of character and conduct required by the 6th article of the General Rules and Regulations, approved by His Excellency the Governor-General in Council, on the 22nd December, 1856, shall examine the candidate.

If, upon his examination, it is found that the candidate can read and write sufficiently well, knows the Rudiments of Grammar in his mother tongue, Arithmetic as far as the rule of three inclusively, and has some knowledge of Geography, the Principal shall grant him a certificate.

Article Second.—The candidate having thus obtained the certificate of the Principal, shall then (in the presence of two witnesses, who, with the Principal, shall countersign the same) sign an application in writing for admission, containing the declaration required by the 23rd general regulation. This shall be forwarded to the Superintendent of Education, together with all the certificates and other documents required, and, if the whole be found correct, the Superintendent shall cause the name of the candidate to be inscribed in the Register, and notice thereof shall be given to the Principal.

Article Third.—The Teachers-in-training shall state the place of their residence; and those who cannot reside with their parents will be permitted to live in boarding-houses, but in such only as shall be specially approved of. No boarding-houses having permission to board male Teachers-in-training will be permitted to receive female Teachers-in-training as boarders, and *vice-versa*.

Article Fourth.—Every Teacher-in-training, on passing the examinations, will be allowed a sum, not exceeding $36,* to assist in paying his board.

Article Fifth.—Every Teacher-in-training, residing at a distance of more than ninety miles from the City of Montreal, shall be entitled to receive an allowance for travelling expenses proportionate to the distance, but not to exceed ten dollars *per annum*.

* Except in the case of Teachers-in-training for the Academy Diploma, who may receive a sum not exceeding $80.

Article Sixth.—The total amount of allowances paid to Teachers-in-training under the foregoing articles shall not exceed $1,333.33 currency, yearly—that being the sum granted for that object; and when the whole of this amount is appropriated, such Teachers-in-training as may apply for admission shall not be entitled to any portion thereof until vacancies shall occur.

(Special Regulations for Government and Discipline.)

Article First.—Teachers-in-training guilty of drunkenness, of frequenting taverns, of entering disorderly houses or gambling houses, or keeping company with disorderly persons, or committing any act of immorality or insubordination, shall be expelled.

Article Second.—There shall be no intercourse between the male and female Teachers-in-training while in School, or when going to, or returning from it. Teachers of one sex are strictly prohibited from visiting those of the other.

Article Third.—They are on no account to be absent from their lodgings after half-past nine o'clock in the evening.

Article Fourth.—They will be allowed to attend such lectures and public meetings only as may be considered by the Principal conducive to their moral and mental improvement.

Article Fifth.—Proprietors of boarding-houses authorized by the Principal shall report to him any infraction of the rules with which they may have become acquainted.

Article Sixth.—The Professors shall have the power of excluding from the lectures for a time any student who may be inattentive to his studies, or guilty of any minor infraction of the regulations.

Article Seventh.—Teachers-in-training will be required to state with what religious denomination they are connected; and a list of the Students connected with each denomination shall be furnished to one of the Ministers of such denomination resident in Montreal, with a request that he will meet weekly with that portion of the Teachers-in-training, or otherwise provide for their religious instruction. Every Thursday after four o'clock will be assigned for this purpose.

Article Eighth.—In addition to punctual attendance at weekly religious instruction, each Student will be required to attend public worship at his own church, at least every Sunday.

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REGULATIONS FOR ACADEMY DIPLOMAS.

Adopted by the Protestant Committee, 26th May, 1886, and approved by the Lieutenant-Governor in Council, 31st July, 1886.

"That all Academy Diplomas granted by the Protestant Normal Schools, and Boards of Examiners, after the first of July, 1886, be named and granted in accordance with the following regulations:

REG. I.—Each Academy Diploma, granted hereafter, shall clearly indicate the class of diploma and the particular provision of these regulations, under which the Candidate is entitled to the Diploma.

REG. II.—Academy Diplomas granted by Boards of Examiners, and the Academy Diplomas granted to the Students of the Academy Class of the McGill Normal School, shall be second class academy diplomas.

REG. III.—Graduates in Arts from any British or Canadian University, who have passed in Latin and Greek in the Degree Examinations, or who have taken a first class standing in Latin and Greek at their intermediate examination, shall be entitled to receive first class academy diplomas, provided that they have also taken either (a) the regular course in the Art of Teaching at the McGill Normal School, or (b) a first class standing in the special professional examination, provided for such graduates by the McGill Normal School, or (c) certificates from the Inspector of Academies that they have taught successfully for two years in an Academy or High School. Such aforesaid graduates as take only second class standing in the special professional examination of the foregoing sub-section, (b), shall be entitled to only second class academy diplomas.

REG. IV.—Teachers holding second class Academy Diplomas from the McGill Normal School, who have taken (a) the second year in Arts and a first class standing in Latin and Greek, in their intermediate examination, or (b) in the case of female candidates, the Examination for the Senior Associate in Arts, (taking both Latin and Greek) of the University of McGill or of Bishop's College, shall be entitled to receive first class academy diplomas.

REG. V.—Teachers who hold (a) academy diplomas granted before the first July, 1886, or (b) second class academy diplomas granted under these regulations, and who produce satisfactory proof to the Protestant Committee that they have taught successfully for at least ten years, shall, when recommended by the committee, be entitled to receive first class academy diplomas.

REG. VI.—Any candidate who presents to the Principal of the McGill Normal School, (a) the requisite certificate of age and of good moral character, and (b) satisfactory certificates that he has complied with either of the foregoing regulations, III, IV, or V. shall be recommended by him to the Superintendent of Public Instruction, for an Academy Diploma of the class to which he is entitled under the regulations.

FORM OF CERTIFICATE OF MORAL CHARACTER REQUIRED BY REGULATION VI.

"This is to certify that we, the undersigned, have personally known and had opportunity of observing.....for the .....last past; that during all such time *his* life and conduct have been without reproach; and we affirm that we believe *him* to be an upright, conscientious, and strictly sober *man*."

"*This certificate must be signed by the Minister of the congregation to which the candidate belongs, and by two School Commissioners or Trustees, for candidates under Regulations III. and IV, and also by the Inspector of his district for a candidate under Regulation V.*"

PROVISIONS FOR SPECIAL PROFESSIONAL EXAMINATION, UNDER REGULATION III FOR ACADEMY DIPLOMAS.

1. The examination of Bachelors of Arts, candidates for the Normal School diploma, shall be held in the Normal School, on and after the 15th of May in each year, and the results shall be declared at the close of the Normal School Session in May.

The Principal of the School is authorized to send examination papers to the University of Bishop's College and to Morrin College, for the use of students in their graduating classes, and such students are entitled to receive their diplomas on their graduating.

2. The period for study in the Model School shall be fixed from time to me by the Principal, and shall extend over at least four weeks. The students of Bishop's College are required to present a certificate of attendance in its School, and students of Morrin College a similar certificate of attendance at a School in Quebec, sanctioned by the College.

Syllabus of Examination in the Art of Teaching for candidates being University Graduates, and presenting themselves for the Normal School examination.

1. Acquaintance with School Laws, with arrangements indicated by the Education Department, and with the regulations made by the Protestant Committee of the Council of Public Instruction, in so far as these refer to the duties of Teachers. (The only text-book on these subjects is the School Law and the documents issued from time to time by the Protestant Committee of the Council of Public Instruction.)

2. A knowledge of the aim and possible attainment of school life, of the annual progress to be expected, of the best classification, the best arrangement of

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school duties tending to this end, and of the mode of recording all facts that may be necessary respecting the attendance and progress of pupils.

3. The subject of discipline, and, in relation to it, the teacher, the parents, the pupils, rewards, punishments, and the formation of the habit of instinctive obedience.

4. The best methods of imparting knowledge, how to present it to the understanding, how to fix it in the memory, how rightly to govern a class in receiving knowledge, and how to conduct a successful class recitation, together with the methods of instruction in each important branch of school work.

5. Methods of using books aright, and of investigating truth, by weighing evidence and by using the senses as instruments of research.

6. The physical, mental and moral constitution of the child, and the demands that society will hereafter make upon him.

To prepare for such an examination the candidate should carefully weigh his own experiences as a learner, should closely examine the methods in vogue in a good school, and should add to the impressions received from his general reading the results of studying such works as Abbott's Teacher, Morrisson's School Management, the Quincy Methods, Baldwin's Art of School Management. A thorough knowledge of at least one of these books will be required.

MODEL SCHOOLS OF THE McGILL NORMAL SCHOOL.

Boys' School.—George Parmelee, *Head Master.*

Selina Sloane,
Elizabeth Reid, } *Assistants.*

Girls' School.—Jane E. Swallow, *Head Mistress.*

Mary J. Peebles,
Louisa McNaughton, } *Assistants.*

Primary School.—Lucy H. Derick, *Head Mistress.*

Marion Taylor, *Assistant.*

These Schools can accommodate about 300 pupils, are supplied with the best furniture and apparatus, and conducted on the most modern methods of teaching. They receive pupils from the age of six and upwards, and give a thorough English Education. Fees, Boys' and Girls' Model Schools, 25c. to 40c. per week; Primary school 20c.; payable weekly in advance.

Observatory.

Latitude, N. 45° 30′ 17″. Longitude, $4^h\ 54^m\ 18^s.55$.

Height above sea level 187 ft.

Superintendent.—C. H. McLeod, Ma.E.

Assistant Superintendent.—G. H. Chandler, M.A.

Assistant.—E. H. Hamilton, B.A.Sc.

Meteorological Observations are made every fourth hour, beginning at $3^h\ 0^m$ Eastern standard time. Independent bi-hourly temperature observations are also made. The principal instruments employed are the following:—Two standard mercurial barometers; one Kew standard thermometer; two Pastorelli thermometers; one maximum thermometer; one minimum thermometer; one set of six self-recording thermometers, with controlling clock battery, etc.; two anemometers; one wind vane (wind-mill pattern); one anemograph, with battery, etc.; one sunshine recorder; one rain-band spectroscope; one rain gauge; and several spare thermometers.

The Anemometer and Vane are on the summit of Mount Royal, at a point about three-quarters of a mile north-west of the Observatory. They are 57 feet above the surface of the ground and 810 feet above sea-level.

The Astronomical Equipment consists of:—The Blackman Telescope (6¼ in.); a photoheliograph (4½ in.); a 3¼ in. transit, with striding level; two 2 in. transits, arranged as collimating telescopes; one sidereal clock; one mean-time clock; one sidereal chronometer; one mean-time chronometer; one chronograph; batteries, telegraph lines and sundry minor instruments.

Observations for clock errors are made on nearly every clear night. Time exchanges are regularly made with the Harvard College and the Toronto Observatories. Time signals are distributed throughout the city by means of the noon time-ball, continuous clock signals and the fire alarm bells; and to the country, through the telegraph lines.

The photoheliograph, which has only recently been purchased, will be employed to obtain a photograph of the sun, once on each clear day.

The Blackman telescope is employed in occasional work and for educational purposes.

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University Gymnasium.

MR. FREDERICK S. BARNJUM, Instructor.

The classes, which are open to the Students of all the Faculties, will meet at the University Gymnasium, in University Street, at hours to suit, as far as possible, the convenience of Students, and which will be announced at the commencement of the Session.

THE WICKSTEED GOLD, SILVER AND BRONZE MEDALS FOR PHYSICAL CULTURE (the gift of Dr. R. J. Wicksteed) are for competition to students of the graduating class, and to students who have had instruction in the gymnasium for two sessions, the gold medals to the former, the silver and bronze medals to the latter.

The award of these medals is made by Judges, appointed by the Corporation of the University.

Every competitor for the gold medal is required to lodge with the Judges, before the examination, a certificate of good standing in the graduating class, signed by the Dean or Secretary of the Faculty to which he belongs, and the medal will not be awarded to any student who may fail in his examination for the degree.

University Societies.

THE GRADUATES' SOCIETY OF McGILL UNIVERSITY.

INCORPORATBD 1880.

OFFICERS FOR 1887-88.

President:

JAMES STEWART, M.D.

Vice-Presidents:

W. GARDNER, M,D. | SELKIRK CROSS, B.C.L.

A. ROBERTSON, B.A.

Secretary:

A. FALCONER, B.A.

Treasurer:

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T. W. MILLS, M.A., M.D. | W. DIXON, B.A.

Non-Resident Councillors:

WM. OSLER, M.D,, Philadelphia. | REV. E. J. REXFORD, M.A., Quebec.
J. J. McLAREN, B.C.L., Toronto. | HON. W. W. LYNCH, B.C.L., Quebec.
B.CHAMBERLAIN ,M.A.,B.C.L.,Ottawa. | REV. W. J. DEY, M.A.

UNDERGRADUATES' LITERARY SOCIETY.

CONSTITUTED 1880.

The object of this Society is the mutual improvement of this members, by means of debates, essays, readings, &c. The Society is epen for membership to all students attending the classes in any ofthe Faculties of McGill College.

OFFICERS FOR 1886-7.

President:

R. B. HENDERSON.

Vice-Presidents:

H. PEDLEY. | W. ROGERS.

Secretary:

J. A. MACPHAIL.

Assistant Secretary:

R. MACDOUGALL.

Treasurer:

W. DEEKS.

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McGILL COLLEGE YOUNG MEN'S CHRISTIAN ASSOCIATION.

OBJECT.—To unite in an Association all who are interested in the cause of religion, for the purpose of mutual help in the Christian life, and for the promotion of good morals and Christian living in the College.

MEMBERSHIP.—Open to Students of all the Faculties. Membership is of two kinds : Active—Open to a member of an Evangelical church ; Associate—Open to any young man of good moral character. A social reception is given to new students at the beginning of the session.

OFFICERS.

Honorary President : PRINCIPAL DAWSON.

President : JOHN MCDOUGALL, B.A.,	*Vice-Presidents :* W. G. STEWART, B.A., Med. F. W. MCCALLUM, Arts.
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Rec. Secretary : A. H. HAWKINS, App. Science.	*Corresponaing Secy :* A. E. CHILDS, App. Science.

McGILL UNIVERSITY ATHLETIC ASSOCIATION.

ESTABLISHED 1884.

Open for membership to undergraduates in this University.

OFFICERS 1887-88.

President : SIR WILLIAM DAWSON.

Vice-President :
JOHN A. SPRINGLE.

Secretary : C. H. MACNUTT.	*Treasurer :* R. L. MACDONNELL, B.A., M.D.

Assistant Treasurer : JOHN DUNLOP.

IN AFFILIATION.

McGill Football Club, *Secy.:* WM. J. HAMILTON.	*McGill Hockey Club,* *Secy. :*

Annual Field Meeting 14th October, 1887, comprising a programme of 21 events.

Football season opens September 15th. All players should be in condition by that date.

The Secretaries will furnish all information on application to intending students and others.

Fine cinder track and apparatus ready for use.

McGILL COLLEGE BOOK CLUB.

ESTABLISHED A.D. 1869.

The object of the Club is to procure an early supply of new books (novels excluded) for its members. The books when no longer required by the Club are presented to the College Library. Membership is open to all whether connected otherwise with the College or not. By a special regulation of corporation, members are entitled to the use of the College Library. (See Calendar).

The following extracts are taken from the last Annual report :—

All members and friends of McGill University will be disposed to feel a strong interest in a club which has added, and is adding, so largely to the University library, and may be fairly asked to support it ; and all persons with literary tastes may be invited to join with them because of the wide extent of reading offered. The committee believe that there have been very few English books suitable to the tastes of readers, published during the past eighteen years that have not been found on the shelves. To make sure of this, as far as possible, it has been the practice of the committee for many years to order almost all books coming within the club rules, that have been suggested by readers, the only limitation being the financial condition of the club.

	Volumes		Works.
Books purchased during the year.....	191	comprising	164
" sent to McGill College.....	352	"	287
" on shelves and in hands of members..	621		

Subscription :—$10 yearly.

The books are kept and new subscribers' names enrolled at Messrs. Dawson Bros'. (Branch,) 1336 St Catherine St.

COMMITTEE FOR 1887-88.

DR. JOHNSON,
REV. DR. MURRAY,
MR. P. T LAFLEUR,
MR. J. A. LEARMONT,
REV. DR. CORNISH.

Addenda.

BOTANY.

Additional Department (Fourth Year).
Fee for materials, instruments and reagents, $8.
Two lectures with practical work, each week.
Course—Advanced Histology.

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EXAMINATION PAPERS

OF THE

McGILL UNIVERSITY,

MONTREAL.



SESSION OF 1886-7.

Montreal:
PRINTED BY JOHN LOVELL & SON,
ST. NICHOLAS STREET.
1887.

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MONTREAL

EXAMINATION PAPERS

SESSION OF 1880-7

PRINTED BY JOHN LOVELL & SON,
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1880.

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(A) Faculty of Arts.

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CLASSICAL AND MODERN LANGUAGE SCHOLARSHIPS.

GREEK.

THURSDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Thucydides, Bk. VI., chaps. 57—58.

2. (*a*) Write explanatory notes on the following:—(1) *ἡ ἑορτή*. (2) *ἐξω*—with what is this to be construed? (3) *τῷ κεραμεικῷ καλουμένῳ*. (4) *ὥσπερ εἶχον*,—supply the ellipsis. (5) *ἔτυπτον καὶ ἀποκτείνουσιν*,—why the change of Tense? (6) *ἀγγελθέντος*,—parse and note the peculiarity of syntax. (7) *πρότερον ἢ αἰσθέσθαι*:—some Mss. have *αἰσθεσθαι*:—point out the difference in tense and meaning of these readings, and show which is preferable. (8) *εἰδὼς * * * ἰσχυρ ζομαι*—(cap. 55),—what reasons have been suggested for this more more accurate knowledge of the affair on the part of Thucydides?

3. Translate:—(B) Herodotus, Bk. VIII., chaps. 98-99.

4. (*a*) *ἔῤῥει μὴ οὐ καταιύσαι*,—explain this usage of the double negative. (*b*) *ἀγγαρήϊον*,—cite the verb formed from the same root, and a passage in the new Test. where it is used. (*c*) Parse the following words from Herodotus, and give their Attic equivalents:—*ἀγγελέοντα, ἐπιτελέουσι, κιθῶνας, ἐποίευν, πλεῦνες, ὦν*.

5. Translate:—(C) Demosthenes, Olynthiacs, III., §§ 5-6.

6. (*a*) (1) *μαιμακτηριών, ἑκατομβαιών, βοηδρομιών*,—what months according to our Calendar? (2) *Ἡραῖον τεῖχος*,—what and where was this? (3) *τάλαντα ἑξήκοντα*,—express this in sterling, or in our own currency. (4) *εἰσφέρειν, κενάς*,—explain. (5) *ἠφίετε, ἠνώχλει*,—parse, and explain the formation of the latter. (*b*) Explain:—*θεωρικά, νομοθέτας, λειτουργίαι, ψήφισμα, προβούλευμα*. (*c*) Name the dates and objects of the delivery of these orations.

7. Translate:—(D) Xenophon, Hellenics, I., chap. vii. secs. 5-7.

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8. (*a*) What have you to remark on the verbs ἀπελογήσατο, πλέοιεν, ἐπειθον, in ext. (D)? (*b*) Explain (1) πρωτέθη λόγος, (2) τὰς χεῖρας οὐκ ἂν καθεώρων, (3) τὴν βουλὴν προβουλευσασαν, (4) Ἀπατούρια, (5) sec. 9, διαψηφίσασθαι κατὰ φυλάς, (6) οἱ πρυτάνεις, (7) τὸ βάραθρον, (8) ἡ ἐκκλησία. (*c*) What period of the Peloponnesian War is covered by this book of the Hellenics?

9. Translate:—Euripides, Medea, vss. 686–705.

11. (*a*) ἄτιμοι ἐσμέν:—Explain this usage of the *Masculine plural*. (*b*) ἐφυ, 690; ἦν, 701:—explain, and illustrate from Horace this use of the Imperfect. (*c*) καρτερεῖν δὲ βούλεται:—What other reading? (*d*) ἥσθετ' ἠδικημένη, 26:—Name the other verbs that are construed with the participle. (*e*) σοὶ, 51:—on what does the *Gen.* depend? (*f*) ἐλᾶν, 69:—what tense and how is it formed?

11. (*a*) Name the dialects used by the writers from whom the above extracts have been taken. (*b*) Distinguish between θεῶν—θέων τιμάν—τιμᾶν. ἄλλα—ἀλλά. βασίλεια—βασιλεια. ἐπαινος—ἐπαινός. ἰδοῦ—ἰδού. τινῶν—τίνων. φῶς—φώς. τρόχος—τροχός.

LATIN.

FRIDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Tacitus, Annals, Book I., chap. lxxiii.

2. Write short explanatory notes (grammatical) on the meaning of the following:—(*a*) Sullae *dominatio*, Crassi *potentia* (c. 1). (*b*) In Augustum cessere (ib.) (*c*) *Abolendae* magis *infamiae* (3). (*d*) Haec atque talia *agitantibus* gravescere valitudo Augusti (5). (*e*) Ambulantis Tiberii *genua advolveretur* (13). (*f*) *Causam* discordia (27). (*g*) Circumdatae stationes *stratis* (50).

3. Translate:—(B) Pliny, Select Letters:—

Alii ab indice nominati esse se Christianos dixerunt et mox negaverunt; fuisse quidem, sed desisse, quidam ante triennium, quidam ante plures annos, non nemo etiam ante viginti. Hi quoque omnes et imaginem tuam deorumque simulacra venerati sunt et Christo male dixerunt. Adfirmabant autem hanc fuisse summam vel culpae suae vel erroris, quod essent soliti stato die ante lucem convenire carmenque Christo quasi deo dicere secum invicem seque sacramento non in scelus aliquod obstringere, sed ne furta, ne latrocinia, ne adulteria committerent, ne fidem fallerent, ne depositum appellati

abnegarent: quibus peractis morem sibi discedendi fuisse, rursusque *coeundi* ad capiendum cibum, promiscuum tamen et innoxium; quod ipsum facere desisse post edictum meum, quo secundum mandata tua a hetaerias esse vetueram. Quo magis necessarium credidi ex duabus ancillis, quae ministrae dicebantur, quid esset veri et per tormenta quaerere. Nihil aliud inveni quam superstitionem pravam immodicam.

4. With what object was the letter from which the above extract is taken written? Point out its value and importance.

5. Translate:—(C) Virgil, Georgics, I., vss. 316-334.

6. (*a*) Point out the poetic beauties of ext. (E). (*b*) Comment on the meaning of the following words or phrases:—parcis (vs. 4), Chaonius (8), Liber (7), Chalybes (58), Novalis (71), Improbus (119), Segnis (151), Intempestus (247), Cereale papaver (212), Genialis (320), Obscenus (470).

7. Translate:—(D) Horace, Epp. I., ep. 25, vss. 1-18.

8. (*a*) Was the estimate which Horace here formed of his Epistles justified by the appreciation of his own countrymen and of others?

———(*b*) Qui non moderabitur iræ
Infectum volet esse, dolor quod suaserit et mens.
Dum pœnas odio per vim festinat inulto. ii. 59—61.

Translate. What cases does *moderor* govern? Why is the verb *suaserit* in the subjunctive mood? Some editions read *exmens* instead of *et mens*. Is it legitimately compounded, and are there other adjectives in Latin similarly formed?

9. Explain any peculiarity of construction in the following:—(1) Nullius addictus jurare in verba magistri. (2) Laevo suspensi loculos tabulamque lacerto. (3) Antenor censet belli praecidere causam. (4) Patiar vel inconsultus haberi. (5) Pane egeo jam mellitis potiore placentis. (6) Vir bonus et sapiens dignis ait esse paratus.

10. Give the meaning and derivation of the following words:—Camena, catellam, periscelidem, diludia, personam, catellus, cœnacula, exilis, viatica, salebras, chlamydem, planum.

11. Translate:—(E) Terence, Adelphi, Act IV., Sc. 4, vss. 75-93.

12. (*a*) Parse the following verbs:—siit, operiere, pepereris, reprensum, insuerit, cedo, jussim, ausim, recepso, extinxem, direxti, protraxe. (*b*) Analyse the construction and explain the syntax of the following extracts:—(*a*) Hominem maximi preti te esse hodie animo judicavi meo. (*b*) Aliquo abeam, atque edormiscam hoc villi. (*c*) Sane nollem huc exitum. (*d*) Discrucior animi. (*e*) Et istam, quod potes, fac consolere. (*f*) Profugiet aliquo militatum. (*g*) Dari nuptum non potest.

GREEK AND LATIN PROSE COMPOSITION.

THURSDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek:—

1. Pythagoras used to say that these two excellent things had been given by the gods to men, speaking truth and doing good. 2. The King hoped that the Athenians would come out against him and not suffer their land to be laid waste. 3. Gelon after having conquered the Carthaginians at Himera, brought the whole of Sicily under his sway. 4. So long as Pericles was their leader, the Athenians performed many noble achievements.

(B) Translate into Latin:

How the Plebeians got their own Magistrates.—At last, in 494, only sixteen years after the driving out of the kings, the plebeians thought that this state of things could not be borne any longer. So they marched out of Rome in a body, and took up a position on a hill a few miles away from the city, and declared that they would found there a new plebeian city, and leave the patricians to live in Rome by themselves. You may imagine the patricians did not like being left in this way, so they sent to the plebeians a wise man, Menenius Agrippa, to persuade them to come back. He told them a fable: "Once upon a time the other members of the body conspired against the belly; they declared that they had all the work to do, while the belly lay quietly in the middle of the body and enjoyed without any labour everything they brought it. So they all struck work, and agreed to starve the belly into subjection. But while they starved the belly, the whole body began to waste away, and all the members found that they were becoming weaker themselves. So you plebeians will find that in trying to starve out the patricians you will ruin yourselves." The plebeians thought there was much truth in this, and they agreed to go back on condition that they might have officers of their own to protect them.

ANCIENT HISTORY.

FRIDAY, SEPTEMBER 17TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. (*a*) What are the divisions of History? (*b*) Name the sources of History, mentioning the leading authorities in ancient history and geography. (*c*) Give the geographical position of ancient Media, Armenia, Parthia, Syria, Chersonesus (1) Taurica, (2) Thracica, and (3) Cimbrica, with modern names where you can.

2. To what family of the human race did the Carthaginians belong? Give a general account of the national characteristics and political institutions of the Carthaginians. In what ways do you suppose the position and interests of civilized nations in Western Europe would have been affected if Carthage had conquered Rome?

3. Give an account of the accession of Darius I., and of the leading events of his reign. What was the great principle of his policy in regard to the western nations?

4. (*a*) Name the earliest inhabitants of Greece, and give the legendary genealogy of the Hellenes. (*b*) Specify the most noticeable features of early Greek society as represented in the Homeric poems. (*c*) What causes tended to Greek unity? To what may their partial operation and ultimate failure be attributed?

5. What events and causes led to the establishment and overthrow of the supremacy of Athens?

6. When and under what circumstances was Greece reduced into the condition of a Roman Province?

7 (*a*)The leading races of ancient Italy. (*b*) The Etruscans;—their origin, and physical and intellectual characteristics. (*c*) What races offered the stoutest opposition to Rome in the course of her subjugation of Italy?

8. The leading events in the political career of Servius Tullius; Sp. Cassius; The Gracchi; Sulla; and Cicero.

FRENCH.

SEPTEMBER, 21ST:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL.D.

1. In how many tragedies of Racine are the subjects taken from the Roman History? How many are imitated from the greek? And how many drawn from Scriptures? Name them respectively.

2. What did Racine wish to represent in the tragedy of *Britannicus?*

3. Give as full a biography of Agrippine and of Junie as you can.

4. Translate into English:—

Albine. Une juste frayeur vous alarme peut-être.
Mais si Néron pour vous n'est plus ce qu'il doit être;
Du moins son changement ne vient pas jusqu'à nous
Et ce sont des secrets entre César et vous.

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Quelques (*a*) titres nouveaux que Rome lui défère,
Néron n'en (*b*) reçoit point qu'il ne donne à sa mère,
Sa prodigue amitié ne se réserve rien :
Votre nom est dans Rome aussi saint que le sien ;
A peine parle-t-on de la triste Octavie (*c*).
Auguste votre aïeul honora moins Livie :
Néron devant sa mère a permis le premier
Qu'on portât (*d*) les faisceaux (*e*) couronnés de lauriers.
Quels effets voulez-vous de sa reconnaissance ?

RACINE, *Britannicus A. sc.* 1.

2. (*a*) Why has *quelques* an *s?* State the three ways to write *quelque*, and when each has to be used. Give examples.

(*b*) What part of speech is *en ?* To what does it refer

(*c*) Who was Octavie ?

(*d*) In what tense is *portât?* Explain fully why is that tense used.

(*e*) What were those *faisceaux?*

3. In the following sentences : De toutes les jeunes filles c'est *la* plus heureuse ; chez ses parents qu'elle est *le* plus heureuse ; explain why you use *la* in the first and *le* in the second.

4. Translate the following sentences : A man whose brother you know. Whose pen is this ? Whose voice do I hear ? And explain how *whose* is to be translated in each.

5. Translate into French : The three hours I have slept have rested me well. The troubles that that affair has caused me have worried me a great deal. The battle was commenced at the break of day. Explain fully how each participle has to be written.

6. Describe the characters of Henriette and of Philaminte in *les Femmes savantes.*

7. Translate into French :—

Whether perfect happiness would be procured by perfect goodness, said Mekayah, this world will never afford an opportunity of deciding. But this, at least, may be maintained, that we do not always find visible happiness in proportion to visible virtue. All natural and almost all political evil, are incident alike to the bad and good ; they are confounded in the misery of a famine, and not much distinguished in the fury of a faction : they sink together in a tempest, and are driven together from their country by invaders. All that virtue can afford is quietness of conscience and a steady prospect of a happier state ; this may enable us to endure calamity with patience ; but remember that patience must suppose pain.—*Rosselas.*

8. Give the history of the foundation of the theatre in France.

ENGLISH LANGUAGE AND LITERATURE.

Spalding's English Literature, (in part); Shakspere, *Tempest*.

MONDAY, SEPT. 20TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Notice the literary character of Massinger, and name some of his writings.

2. What do you know of Sir William Temple?

3. Give a list of the more important works of Dryden, and indicate the nature of each.

3. Tabulate, as you think best, the leading writers of the period 1700—1750. Select two, one distinguished chiefly for poetry, and the other for prose, and give the main features of Spalding's estimate of them and their works.

5. Notice the establishment of the great Reviews in the first quarter of this century, and also the leading critical Essayists of the century.

6. Mention the chief names in British philosophy since 1700, and select two for further comment.

7. Explain the Unities, and state how the Tempest stands in regard to them.

8. Trace Ferdinand through the play.

9. Examine the character of Prospero, and quote from the play in support of your statements.

10. Select from different Scenes in the Tempest: (*a*) four examples of Shaksperian syntax, (*b*) six noteworthy allusions, and (*c*) six words with noteworthy meaning. Explain each and say precisely where each occurs.

11. What evidences of Prospero's supernatural power are there in the play

12. Notice peculiarities in the blank verse of Shakspere and illustrate them from the play.

ENGLISH LANGUAGE AND LITERATURE.

Milton, *Paradise Lost*, bks. I. and II.; Trench, *Study of Words*.

MONDAY, SEPTEMBER 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Draw a plan of Milton's Universe and refer to the first two books as you explain it.

2. Quote the Introduction to Paradise Lost.

3. In what connection are references made to Valdarno, the Ammonite, Adonis, Olympus, Phlegra, Lemnos, Ormus, Atlantean shoulders, Alcides, Medusa, Scylla, the Caspian?

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4. How does Milton picture the fallen spirits as employing themselves after the council?

5. Comment on the italicized words in the following extracts: the sacred *influence* of light; this *uncouth* errand; the *buxom* air; his *horrid* hair; the parching air burns *frore; harald's* voice; *unessential* night; *Sovran;* pain —must *exercise* us; Millions of spirits—*amerc't* Of Heaven; *serried* shields; in *guise* of warriors; *flown* with insolence and wine; *abject* and lost; your wearied *virtue;* whose entrails thus *conceiving* fire, *Sublim'd* with mineral fury, aid the winds; *mansion.*

6. Give an account of the building of Pandemonium, and of Moloch's speech in the council.

7. "Then, too, if one is engaged in a controversy—an adversary will lay hold of the name, will seek to bring out a real contradiction between it and its bearer." Illustrate.

8. In what connection are the words animosity, prejudice, and resentment mentioned, and in what way?

9. Mention words derived from proper names in Homer. How is the objection of the Quakers to use the names commonly given to the days of the week, met?

10. Comment on the italicized letters in the words cu*p*-board, cæ*r*uleus, me*r*idies. Of what are these words examples?

11. Mention words (*a*) that have their origin in the attempt of Louis XIV. to convert the Protestants; (*b*) that were contributed by the French Revolution.

12. Mention departments in the study of words that have not been touched on in the foregoing questions, and give specimens from each.

MATHEMATICAL SCHOLARSHIP.

ANALYTIC GEOMETRY (*First Paper*).

THURSDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D

1. If $S = o$ be the equation of a conic and $a = o$ that of a right line, interpret the equation $S + k\,a^2 = o$, explaining fully.

2. Show that two conics similar and similarly placed can cut each other only in two finite points.

3. The anharmonic ratio of a pencil, whose sides pass through four fixed points of a conic, and whose vertex is any variable point of it, is constant.

4. Prove Brianchon's theorem "The three opposite diagonals of every hexagon circumscribing a conic intersect in a point."

5. Employing the equation of a conic referred to two tangents and their chord of contact $LM = R^2$, find the locus of the vertex of a triangle circumscribed to a conic which has two of its vertices moving on fixed right lines.

6. Find in trilinear co-ordinates the equation of the circle *circumscribing* the triangle formed by the lines $\alpha = o\ \beta = o, \gamma = o$.

a. Give the geometrical interpretation of the equation when found.

7. Show that the equation of the circle inscribed in the same triangle is

$$l^{\frac{1}{2}}\ a_{\frac{1}{2}} + m^{\frac{1}{2}}\ \beta^{\frac{1}{2}} + n^{\frac{1}{2}}\ \gamma^{\frac{1}{2}} = o.$$

8. Prove by trilinear co-ordinates that the three bisectors of the sides of a triangle meet in a point.

9. How is a non-homogeneous equation $\alpha = o$ reduced to the homogeneous form

$$l\alpha + m\beta + n\gamma = o.$$

10. Find the equation of the *evolute* of the parabola.

11. Find the equation of the conic which makes intercepts $\lambda, \lambda', \mu, \mu'$, on the axes.

12. The equation $Ax^2 + Bxy + Cy^2 = F$ is referred to oblique axes inclined at an angle ω, transform it to the axes of the conic.

ANALYTIC GEOMETRY (*Second Paper*).

FRIDAY, SEPTEMBER 17TH—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Find the condition that two conic sections given by the general equation should be similar even though not similarly placed.

2. Define the "eccentric angle" and explain its use in discussing properties of conic sections. Apply it to construct geometrically the diameter of an ellipse conjugate to a given one.

3. Find the locus of the intersection of tangents to a parabola which cut each other at right angles.

4. Find the equation of the tangent to a parabola at a given point.

5. Find the polar equation of the ellipse, the focus being the pole.

6. The harmonic mean beween the segments of a focal chord of an ellipse is constant and equal to the semi parameter.

7. Confocal conics cut one another at right angles.

8. In the ellipse the rectangle under the focal radii to any point is equal to the square of the semi conjugate diameter.

9. Find the locus of the middle points of chords, parallel to the line $y = mx$, of the conic given by the general equation.

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10. Given base and vertical angle of a triangle, find the locus of the vertex.

11. Find the condition that the general equation of the second degree should represent a pair of right lines.

12. Find the equation of a line passing through a given point, and making a given angle with a given line $y = m\,x + 6$.

CALCULUS.

SATURDAY, SEPTEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Find the volume of a paraboloid of revolution.

2. Assuming the equation of the Catenary—

$$y = \frac{a}{2}\left(e^{\frac{x}{a}} + e^{\frac{-x}{a}}\right)$$

show that the length measured from the vertex is given by the equation—

$$s = \frac{a}{2}\left(e^{\frac{x}{a}} - e^{\frac{-x}{a}}\right).$$

3. Find the area of a circle, and thence that of an ellipse.

4. Show that the whole area of the cycloid

$$x = a\,(\theta - \sin\theta),\ y = a\,(1 - \cos\theta)$$

is $3\,\pi\,a^2$.

5. Find the integral of—

$$\frac{(A\cos x + B\sin x + C)\,dx}{a\cos x + b\sin x + c}.$$

6. Find the formula of reduction for—

$$\int \frac{dx}{(a + b\cos n)^n}.$$

7. Examine the cases in which $\sin^m\theta\,\cos^n\theta\,d\theta$ is immediately integrable, showing the mode of integration.

a. Find $\int \sin^3\theta\cos^7\theta\,d\theta$; $\int \frac{\sin^2\theta\,d\theta}{\cos^6\theta}$; $\int \frac{d\theta}{\cos^6\theta}$.

8. Explain the method of integrating rational fractions in the case of multiple real roots.

9. Using the eccentric angle, show that the radius of curvature in the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ may be expressed by

$$\rho = \frac{(a^2\sin^2\phi + b^2\cos^2\phi)^{\frac{3}{2}}}{a\,b}$$

10. Prove that, using polar co-ordinates, we have for any curve—

$$ds = \sqrt{1 + \frac{r^2 \, d\theta^2}{dr^2}} \cdot dr.$$

11. Find the values of x which will make $u = a \cos x + b \cos 2x$ a maximum or a minimum.

12. Given the equation $z = x + y\,\phi(z)$ in which x and y are independent variables, investigate a method for expanding any function of z in ascending powers of y.

13. Find the value of $(1 - x) \tan \frac{\pi x}{2}$ when $x = 1$.

14. Prove the expansion—

$$\frac{\pi}{2} = z + \frac{\sin z}{1} \cos z + \frac{\sin 2z}{2} \cos 2z + \frac{\sin^3 z}{3} \cos 3z + \&c.$$

HIGHER ALGEBRA, THEORY OF EQUATIONS, PLANE AND SPHERICAL TRIGONOMETRY.

TUESDAY, SEPTEMBER 21ST :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. In a determinant of every constituent in every row (or every column) is resolvable into the sum of two others, the determinant is resolvable into the sum of two others.

2. Prove that :—

$$\begin{vmatrix} \cos \frac{1}{2}(\alpha - \beta), & \cos \frac{1}{2}(\beta - \gamma), & \cos \frac{1}{2}(\gamma - \alpha) \\ \cos \frac{1}{2}(\alpha + \beta), & \cos \frac{1}{2}(\beta + \gamma), & \cos \frac{1}{2}(\gamma + \alpha) \\ \sin \frac{1}{2}(\alpha + \beta), & \sin \frac{1}{2}(\beta + \gamma), & \sin \frac{1}{2}(\gamma + \alpha) \end{vmatrix} = 2 \sin \tfrac{1}{2}(\alpha - \beta) \sin \tfrac{1}{2}(\beta - \gamma) \sin \tfrac{1}{2}(\alpha - \gamma).$$

3. If a system of equations—

$a_1 X + b_1 Y + c_1 Z = 0$, $a_2 X + b_2 Y + c_2 Z = 0$, $a_3 X + b_3 Y + c_3 Z = 0$,

be transformed by the substitutions—

$X = \alpha_1 x + \alpha_2 y + \alpha_3 z$, $Y = \beta_1 x + \beta_2 y + \beta_3 z$, $Z = \gamma_1 x + \gamma_2 y + \gamma_3 z$,

then the determinant of the transformed system will be equal to $(a_1 b_2 c_3)$ the determinant of the original system, multiplied by the $(\alpha_1 \beta_2 \gamma_3)$.

4. Define the *reciprocal* of a given determinant, and prove that $(A_1 B C_3) = (a_1 b_2 c_3)^2$.

5. If a determinant vanish, its minors, A_1, A_2, &c., are respectively proportional to B_1, B_2, &c.

6. If the roots of the equation $x^3 + p\,x^2 + q\,x + r = o$ be a, b, c, form the equation whose roots are $\frac{a}{b+c}$, $\frac{b}{c+a}$, $\frac{c}{a+b}$.

7. An equation of an odd degree has at least one real root.

8. Express the sum of the reciprocals of the roots of a given equation in terms of the coefficients.

9. Explain the method by which an equation is freed from factors corresponding to equal roots.

10. In a spherical triangle prove that—

$$\cot \tfrac{1}{2}\,(A + B + C - 180^\circ) = \frac{\cot \frac{1}{2}\,a \cot \frac{1}{2}\,b + \cos C}{\sin C}.$$

11. In any spherical triangle prove—

$$\cos a = \frac{\cos A + \cos B \cos C}{\sin B \sin C}.$$

12. Prove $\cos a = \frac{1}{2}\left(e^{a\sqrt{-1}} + e^{-a\sqrt{-1}}\right)$.

SCIENCE SCHOLARSHIPS.

BOTANY.

FRIDAY, SEPT. 17TH, :—9 TO 12 A.M.

Examiner,..... D. P. PENHALLOW, B. Sc.

1. Explain the principal forms of protoplasmic movement, and show what external influences modify them.

2. Explain the relation of protoplasm to living tissues.

3. Explain the structure of leaves with special reference to the functions of respiration and transpiration.

4. Show what organs are concerned in the process of nutrition, and the special functions of each.

5. Explain the conditions essential to the formation of chlorophyll and ts functions in the plant.

6. Show how to determine the nutrient value of food elements.

7. Explain the origin and structure of pollen, and its relation to reproduction.

8. Explain the application of the term, "Alternation of generations." Examples.

9. The composition and principal internal modifications of the cell wall.

10. Explain the effect of cross and close fertilisation, with an example of each.

BOTANY.

FRIDAY, SEPTEMBER 17TH :—2 TO 5 AFTERNOON.

Examiner,.....D. P. PENHALLOW, B. Sc.

1. Show what trees find their northern limit of distribution in Southern Canada.

2. Show in what important respects the Canadian flora has been modified since European occupation. Examples.

3. Give the distinctive characters of angiosperms and gymnosperms, and show their relative positions in classification.

4. Ranunculaceæ. Characteristics of the family, and the leading genera in the flora of Quebec.

5. Describe the characteristics of the Coniferœ, and enumerate the leading genera in Canada.

6. Enumerate the Canadian families which embrace trees of economic value.

7. Enumerate the principal orders of herbaceous plants in Canada of economic importance.

8. Give the leading characteristics of the Rosaceæ, and its valuable qualities.

Examination of Plants Tuesday, 9 to 12 a.m.

CHEMISTRY.

MONDAY, SEPTEMBER 20TH :—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. What acids are formed by the union of Phosphoric Anhydride with Water? Give the formula of each.

2. Give illustrations of analogies between the compounds of Sulphur and Oxygen.

3. Describe the preparation of Phosphorus from bones, giving equations

4. State what you know with regard to the chemical and physical properties of Silver. Explain also the use of Silver Salts in photography.

5. Describe the manufacture of Caustic Soda.

6. What are the properties of Aluminium? Explain the use of Aluminium Salts in dyeing.

7. How does Oxalic Acid occur in nature? How is it prepared artificially? What are its properties?

8. When Carbolic Acid is treated with strong Nitric Acid what substance is produced? Describe its properties.

9. Give a test for the detection of Dextrose.

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10. What reactions are indicated by each of the following equations:—

$$C_{12}H_{22}O_{11} + H_2O = C_6H_{12}O_6 + C_6H_{12}O_6$$

$$(H_4N)Cl + NaHO = NaCl + H_3N + H_2O$$

LOGIC.

SATURDAY, SEPTEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Give the categorematic words in the proposition:

"To him the meanest flower that blows can give
Thoughts that do often lie too deep for tears."

2. Explain Extension and Intension, Division and Definition.

3. Analyse the proposition in question 1.

4. Explain obls *A*, *E* mthe sy *I*, *O*, and give a concrete example of each.

5. Convert and give the several opposites of the proposition:

"Fame is no plant that grows on mortal soil."

6. Give an example of a syllogism in any mood of the second or third figure, and reduce it to the first.

7. Show, from the general canons of the syllogism, that I E O is illegitimate.

8. (*a*) What is a Sorites? (*b*) Explain how it is analysed.

9. (*a*) Distinguish Logical and Non-logical Fallacies. (*b*) In which class would you place Illicit Process and Ignoratio Elenchi respectively?

10. Point out the fallacy in each of the following arguments:—

(*a*) This man is not fit to travel if he has a fever; but as he has not a fever he is fit to travel.

(*b*) I can afford this luxury; I can afford that; I can likewise afford this other. I may therefore safely indulge in them all.

(*c*) Any study is useful which makes you an exact reasoner; but as poetry does not produce that result, it is not a useful study.

11. Explain one of the Methods of Induction, illustrating by an example.

12. Explain the Deductive Method.

SECOND YEAR EXHIBITIONS.

GREEK.

THURSDAY, SEPTEMBER 16TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate,—Demosthenes, Olynthiacs I. and II.:—

1. Translate:—(A) Olynth. I.—"ταῦτ' οὖν ἐγνωκότας ὑμᾶς * * * ὁπέρον πεπόνθατε." (page 11, Ed. Tauch.). (B) Olynth. II.—"φημὶ δὴ δεῖν * * * τὰ πλοῖα ἃ συλῶσ.ν" (page 25, ib.).

2. In ext. (A).—(1) Explain the ellipsis in *τῷ πολέμῳ προσέχειν* 2 Give the alternate readings for *ἐθρύλειτε*, and *παρῆσαν*. (3) Analyse and construe carefully the sentence *εἰ μὲν γὰρ * * * πεπόνθασιν ἔχειν*. 4) For *ἐκπολεμῶσαι* there is the reading *ἐκπολεμῆσαι*;—show how they differ, and which is preferable and why. In ext. (B).—(1) Explain *εἰσφέρειν χρήματα*. (2) *ἀθ α, λήματα*. (3) Explain the geographical references.

3. (*a*) Write short explanatory notes on :—*εὐθυναι ῥᾴδιαι, ἐν ἡλικία, ἀνεχαίτισε, πεφενάκικεν, λειτουργίαι, ὡ τᾶν, τὴν μετάστασιν—τὴν μεταβολήν, ὑποστείλεσθαι, πεζέταιροι.* (*b*) Why are these speeches called Olynthiacs, and when were they delivered ?

4. Translate :—(C) Herodotus, Bk. III., chap. 62.

5. Parse the following, giving Attic forms for such as are not Attic :—*ἀποκτονέοντα διεπρήξαο, ἀνεστέασι, προσδέκεο, εἰρωτεῦντες, ἀνήγαγε, ἀπίκοντο, ἐμπρῆσαι, ἀπείς, ἐπελελοίπεε, ἠσθη.*

6. Write a short note on the life and writings of Herodotus, and show how the dialect he used stands related to that of Homer and of Demosthenes severally.

7. Translate :—(D) Homer, Odyssey xxi, noting any peculiarities of grammar or of metre :—(*a*) vss. 96–101. (*b*) 269–274. (*c*) 362–365. (*d*) 431–434.

8. Give as accurately as you can (1) the meaning and (2) the derivation and composition of the following words, and give cognate forms in other languages you know :—*κλίμακα, κειμήλια, πόποι, πυκινῶς, κρητῆρας, ἄπτερος, δία, ἀάατον, ταλαεργοί, πολύκμητος.*

9. Parse carefully the following words :—*φρεσί, κληῖδ', μνηστρῆρσι, θέμεν, ἄειραν, κάλλιπ', ἦα, ξυμβλήτην, πετάσθησαν, ἐώλπει, φάσθαι, σπεῖσαν.*

10. Write a short note on Homer and the Homeric Poems.

LATIN.

THURSDAY, SEPT. 16TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate :—(A) Cicero, In Caecilium :—

Deinde sunt testes viri clarissimi nostrae civitatis, quos omnes a me nominari non est necesse : eos qui adsunt appellabo, quos, si mentirer, testes esse impudentiae meae minime vellem. scit is, qui est in consilio, C Marcellus ; scit is, quem adesse video, Cn Lentulus Marcellinus : quorum fide

atque praesidio Siculi maxime nituntur, quod omnino Marcellorum nomin- tota illa provincia adiuncta est. hi sciunt hoc non modo a me petitum esse, sed ita saepe et ita vehementer esse petitum, ut aut causa mihi suscip- ienda fuerit aut officium necessitudinis repudiandum. sed quid ego his testibus utor, quasi res dubia aut obscura sit? adsunt homines ex tota pro- vincia nobilissimi, qui praesentes vos orant atque obsecrant, iudices, ut in actore causae suae deligendo vestrum iudicium ab suo iudicio ne discrepet. omnium civitatum totius Siciliae legationes adsunt praeter duas civitates: quarum duarum si adessent, duo crimina vel maxima minuerentur, quae cum his civitatibus C Verri communicata sunt. at enim cur a me potis- simum hoc praesidium petiverunt? si esset dubium petissent neene, dicerem cur petissent: nunc vero cum id ita perspicuum sit, ut oculis iudicare pos- sitis, nescio cur hoc mihi detrimento esse debeat, si id mihi obiciatur, me potissimum esse delectum.

2. Write a short account of the circumstances and object of the delivery of this oration, giving a summary of the speech, naming the parts into which it is divided.

3. (*a*) *Populati* cuncti:—explain the use of this verb by Cicero. (*b*) *a cessisse reipublicae sublevandae*:—explain the construction. (*c*) Onus *laboris;* officium *necessitudims; crimini* dabis:—explain the use eof th Gen. and Dat.

4. Give the meaning of:—Divinatio, princeps senatus, Circæo poculo, judicium dat, symphoniacos, magister ludi, tabellas, ferre sententias.

5. Translate:—(B) Livy, Book XXII., chap. 2 to *cubile dabant.*

6. (*a*) Construe "placandis Romae dis habendoque dilectu," and note any peculiarity of case formation. (*b*) Give the date of the events with which book XXII opens, and a short account of the events preceding it. (*c*) Write explanatory notes on the following:—(1) Quum de republica re- tulisset. (3) Mavors. (3) Per principes; antesignani (4) Fatalibus libris. (5) Duellis, clepsit, faxitur. (6) Aetas militaris. (7) Prorogato imperio. (8) In sententiam pedibus issent. (9) Praerogativam militarem. (10) Vernovum.

7. Translate:—(C) Virgil, Æneid Bk. VI., vss. 777-790.

8. Explain briefly the legendary references of ext (C).

9. Translate, with explanatory grammatical notes, the following extracts. and point out instances of *hypallage*:—(*a*) Stat ductis sortibus urna. (*b*) Excisum Euboicae latus ingens rupis in antrum. (*c*) Dardani Paridis tela manusque. (*d*) Aeneae addiderat socium, non inferiora secutus. (*e*) Noc- turnos inchoat aras. (*f*) Quam tua navis spoliata armis excussa magistro deficeret tantis undis. (*g*) Primam qui legibus urbem fundabit, (*h*) Dejecto lumina voltu.

10. (*a*) Show the component parts of the following words, and give their meaning:—seclusum, securos, sublimis, haetenus, inmanis, ambages, ad- versus, cognomine, exsomnis, incana. (*b*) Note words in English either *cognate* with or *derived* from any of the above.

11. Translate :—(D) Horace, Odes, Bk. I., Ode. 31.

12. (*a*) Give the names and schemes of the metres of ext. (C) and scan the first stanza. (*b*) On what occasion was the ode written? (*c*) Explain briefly the geographical references.

HISTORY AND GRAMMAR.

SEPTEMBER, 20TH:—AFTERNOON, 2 TO 5.

Examiner,..... REV. DR. CORNISH.

(A) (*a*) 1. Name the original tribes of the Greek people, and point out to what tribes the people of Attica and Sparta severally belonged (*b*) State what you hold to have been the leading characteristics of these two people, respectively.

2. Give a short account, with dates, of the public events in which the following persons played an important part, severally :—(1) Peisistratus; (2) Mardonius; (3) Pericles; (4) Lysander.

3.(*a*) Give an account of the foundation of Rome, and of its first form of government. (*b*) By what events was this form of government brought to an end?

4 (*a*) Name the most important wars by which Rome gained the supremacy over the various states of Italy. (*b*) At what date was her sovereignity over the whole peninsula established?

(B) 1. Define and illustrate, by example, what is meant by *Tmesis, Anastrophe, Zeugma, Arsis, Thesis.*

2.(*a*) What is meant by Augment and Reduplication, and what are they used to denote? (*b*) With what Moods are *εἰ* and *ἐὰν* severally used? (*c*) Write down the Aorist and Future (1st. Sing.) of:—*βούλομαι, ἐλαίνω, διαφθείρω. εὑρίσκω, φέρω.* (*d*) Show how the relative position of the Article with other Pronouns modifies the meaning of statements.

3. From what verbs do you deduce the following:—ultus, adultus, cretus, stratus, occultus, ademptus, pactus, passus? Do any belong to more than one verb?

4. (*a*) Mark the quantity of the penultimate in the following:—*Maritimus, vetitus, progredi, statuerimus, velimus, possumus.* Also of the final vowel of *interea, bene, hodie*, and *cito.*

5. Translate into Latin, with different constructions, "when his work was over he returned home to supper." (*b*) Correct the following sentences:—(*a*) Urbs non parcenda est. (*b*) Mendax haud creditur. (*c*) Missus est viam explorare. (*d*) Quid me fiet parvum facio.

(C) Translate into Greek :—(1) Socrates, the philosopher of Athens, said many wise things, but his enemies persecuted him to death. (2)

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One who admires Solon will not admire the wise men of the present day. (3) The Athenians tarried there many days and ravaged the whole country and did much harm to the people. (4) The soldiers marched out of the city and advanced a hundred stadia into the enemy's country.

(D) Translate into Latin :—

Last of all came the Sabines with a great army, under Titus Tatius, their king. There is a hill near to the Tiber, which was divided from the Palatine Hill by a low and swampy valley ; and on this hill Romulus made a fortress, to keep off the enemy from his city. But when the fair Tarpeia, the daughter of the chief who had charge of the fortress, saw the Sabines draw near, and marked their bracelets and their collars of gold, she longed after these ornaments, and promised to betray the hill into their hands if they would give her those bright things which they wore upon their arms. So she opened a gate, and let in the Sabines, and they, as they came in, threw upon her their bright shields and crushed her to death.

GEOMETRY.

FRIDAY, SEPTEMBER 17TH :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. The rectangle under the sides of a triangle together with the square on the bisector of the external vertical angle is equal to the rectangle under the segments with which the bisector of the external vertical angle divides the base.

2. One vertex of a triangle turns round a fixed point, and the two adjacent vertices move along a given circle ; find the locus of the remaining vertex.

3. Given base, difference of base angles and locus of vertex a given straight line intersecting the base ; construct the triangle.

4. Describe a circle passing through a given point, and touching a given straight line and a given circle, the circle and point lying on the same side of the straight line.

5. If CD be the perpendicular from the centre C of a given circle onan, indefinite straight line AB, and if DE be made equal to the tangent DL, then shall BE be always equal to the tangent BG where B is any point in the given line AB.

6. The reciprocals of lines in harmonical progression are in arithmetical progression, and conversely, the reciprocals of lines in arithmetical progression are in harmonical progression.

7. Through a given point within two given straight lines, any transversal is drawn and a point taken on it, such that the reciprocal of its distance from the given point is equal to the sum of the reciprocals of the intercepts

between the given point and the given lines; find the locus of the point of section.

8. Given three fixed straight lines meeting in a point, if the three vertices of a triangle move one on each of these lines, and two sides of the triangle pass through fixed points; prove that the remaining side passes through a fixed point on the line joining the two given points.

9. Given three circles. Describe any circle and form a triangle ABC with the three radical axes of this circle and each of the given circles. Describe any other circle, and similarly form a triangle $A'B'C'$. The straight lines joining corresponding vertices of these two triangles will meet in a point, and the points of intersection of the corresponding sides will lie on the same straight line.

10. If a system of circles be described cutting a given circle orthogonally, and having their centres in a given straight line, the radical axis of the system will be the perpendicular from the centre of the given circle on the given line.

11. If two tangents and a secant be drawn from any point outside a circle, the two points of contact and the points of section will subtend an harmonic pencil at any point on the circle.

12. Given the base and difference of sides of a triangle; the polar of the vertex with respect to one extremity of the base as origin always touches a fixed circle.

ORDINARY MATHEMATICS.

FRIDAY, SEPTEMBER 17TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Parallelograms about the diagonal of any parallelogram are similar to the whole and to each other.

2. On the same straight line and the same side there cannot be constructed two similar segments of circles which do not coincide.

3. In any right-angled triangle, any rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the sides containing the right angle.

4. The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the rectangles contained by the opposite sides.

5. Find the value of sin 18° to three places of decimals.

6. The area of any triangle is equal to half the product of two sides multiplied by the sine of the included angle.

7. Prove:—

$$Cos\ 2A = 1 - 2\ sin^2 A;\ sin\ \frac{A}{2} = 2\ sin\ \frac{A}{4}\ cos\ \frac{A}{4}.$$

8. Trace the changes of sign in the tangent as the angle increases from 0° to 360°.

9. Solve the equations :—

$$3x^2 - 2xy = 15\ ;\ 2x + 3y = 12.$$

10. Show that the product of two dissimilar surds cannot be rational.

11. Find the fourth power of $x^{\frac{3}{4}} - y^{\frac{5}{2}}$.

12. Find two numbers whose difference is 10 and product one-third of the square of their sum.

THEORY OF EQUATIONS—ALGEBRA.

SATURDAY, SEPTEMBER 18TH :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Investigate a rule for finding the remainder when any rational integral function of x is divided by $x - c$, when c is any constant. Apply it to find the remainder when $x^5 + 7x^4 + 3x^3 + 17x^2 + 10x - 14$ is divided by $x - 4$.

2. If the rational integral expression $f(x)$ consists of a set of terms in which the coefficients are all of one sign, followed by a set of terms in which the coefficients are all of the contrary sign, the equation $f(x) = o$ has one positive root and only one positive root.

3. Investigate a method for transforming an equation into another the roots of which shall be less than those of the proposed equation by a constant difference.

4. Transform an equation into another, the roots of which are the squares of the roots of the proposed equation.

5. Show that the equation $x^4 + 3x^2 + 5x - 7 = 0$ cannot have more than two real roots.

6. If each *negative* coefficient be taken positively and divided by the sum of all the positive coefficients which precede it, the greatest of all the fractions thus formed, increased by unity, is a superior limit to the positive roots.

7. Explain Newton's method for finding a superior limit to the positive roots of an equation ; and apply it to—

$$x^5 + x^4 - 4x^3 - 6x^2 - 700x + 500 = 0.$$

8. Explain the method of depressing a reciprocal equation of an even degree with its last term positive.

9. Apply the method of Indeterminate Coefficients to find the square root of $1 + x$ in a series of powers of x.

10. Expand a^x in a series of powers of x.

11. Sum the series $\frac{5}{3} + 1 + \frac{3}{5} +$ &c *ad infinitum*.

12. Show that the total number of combinations that can be formed out of $n + 1$ things is more than twice the number that can be formed out of n things.

ENGLISH LITERATURE.

Shakspere, *As You Like It*; Trench, *Study of Words*.

SATURDAY, SEPT. 18TH:—AFTERNOON, 2 TO 5.

Examiners,..... } CHAS. E. MOYSE, B.A.
P. T. LAFLEUR, B.A.

1. From what book were the main incidents of As You Like It taken? Mention what characters in the play are of Shakespere's own invention. What internal evidence is said to bear on the date of the play?

2. Trace Touchstone through the play. Quote some of his sayings which seem to you pithy, and mention where each is found.

3. What songs occur in As You Like It? Show that each is fitly introduced.

4. Carefully explain peculiarities of syntax or meaning or form in the following: (*a*) He that escapes me—shall acquit him well (*b*) sweet my coz (*c*) he looks successfully (*d*) quintain (*e*) if that thou be'st found (*f*) to the which place (*g*) I cannot go no further (*h*) duedame (*i*) I die for food (*j*) the unexpressive she (*k*) Atalanta's better part (*l*) seven year (*m*) the cicatrice and capable impressure (*n*) a properer man (*o*) eyne (*p*) the purlieus of this forest (*q*) handkercher (*r*) a gentleman of good conceit (*s*) address'd a mighty power (*t*) breaths that I defied not.

5. In what parts of speech is Shaksperian richer than Modern English? Illustrate from the play.

6. Write the scansion of a typical line of blank verse. In what way do Shakspere's lines often differ from the regular type? Scan and notice peculiarities in:—

(*a*) That he misconstrues all that you have done.

(*b*) Call me not fool till heaven hath sent me fortune.

(*c*) That says his bravery is not of my cost.

(*d*) Of smooth civility yet am I inland bred.

7. Comment on the words villain, officious, pendant, tinsel. Why are they discussed?

8. On what grounds are the words Semitic, Gothic, Revival of learning, and Renaissance open to objection?

9. "No word need be considered so to root itself in its etymology..... that it cannot detach itself from this." Illustrate.

10. Comment on the italicized letters in a*ffi*ance, renow*n*, cinnamo*n*.

11. Why are "comic" words not to be considered new words? Give examples.

12. What is meant by phonetic spelling? What arguments are advanced against phonetic spelling? Illustrate one of them. How would you defend phonetic spelling?

FRENCH.

TUESDAY, SEPT. 21ST :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL.D.

1. Translate into English :—

Le lion et l'âne chassants.

Le roi des animaux se mit un jour en tête
De giboyer : il célébrait sa fête.
Le gibier du lion, ce ne sont pas moineaux
Mais beaux et bons sangliers, daims et cerfs bons et beaux.
Pour réussir dans cette affaire,
Il se servit du ministère
De l'âne à la voix de Stentor.
L'âne à messer lion fit office de cor.
Le lion le posta, le couvrit de ramée,
Lui commanda de braire, assuré qu'à ce son
Les moins intimidés fuiraient de leur maison :
Leur troupe n'était pas encore accoutumée
A la tempête de sa voix ;
L'air en retentissait d'un bruit épouvantable :
La frayeur saisissait les hôtes de ces bois ;
Tous fuyaient, tous tombaient au piège inévitable
Où les attendait le lion.

LA FONTAINE, *liv. ii. f. xix.*

2. When do you express the partitive article by *du, de la, des,* and when do you use only the preposition *de?* Give examples.

3. Write in the plural : *le carnaval, le chou, le verrou, la voix, le chameau, le travail,* and in the singular *les vitraux, les maux, les baux, les beaux.* Give the rules to form the plural of those nouns.

4. What are the numeral adjectives which are used as ordinal in English and cardinal in French? Give examples.

5. How many kinds of determinative adjectives are there? Give them. State the difference in the use of the possessive adjective between the French and the English languages? Give examples.

6. Give the list of the Demonstrative Pronouns? When do you use them? When is the particle *ci* to be used after the Demonstrative Pro noun, and when is it not to be used? Give examples of both cases.

7. What do you call primitive tenses? Write them and state what tenses are formed by each of them.

8. Translate into French in two ways : I must have books. My brother will want friends. Explain how those sentences are rendered into French

8. Write in full the Pluperfect of the Subjunctive, the Future Anterior, and the Preterite Definite of : *S'en aller, vivre, naître, acquérir, venir.*

10. Translate into French :—

I am quite willing to believe that you feel what you say, and I doubt not the sincerity of your words; but I fear a power which will war against the tender feelings which you may entertain for me. You are under the power of a father who desires to marry you to another person; and I am sure that I shall die if that misfortune happens to me. *Les fourberies de Scapin.*

I would go to the post office if I knew that I have a letter there. To acquire knowledge it is necessary to work well. They went away the day before yesterday, on the 24th of May, at seven o'clock in the morning. We hope to see them again very soon.

CHEMISTRY.

MONDAY, SEPTEMBER 20TH :—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. Explain the terms unit-volume and condensation-ratio.

2. What elements constitute the Nitrogen group? Point out their more striking analogies.

3. Write equations illustrating the changes which take place (*a*) when Hydric Sulphide is added to a solution of Lead Nitrate, and (*b*) when Nitric Acid is added to Ammonia-water.

4. In the manufacture of Hydrochloric Acid how much Sulphuric Acid would be necessary to decompose 100 kilogrammes of Salt?

5. How is gaseous Hydrogen Phosphide prepared? Compare its molecular constitution with that of Ammonia.

6. How would you prepare (*a*) Sulphurous and (*b*) Sulphuric Anhydride? Give the properties of each.

7. State what you know with regard to the chemical and physical characters of Selenium and Tellurium.

8. Distinguish carefully between rational, empirical and typical formulæ. Give examples of each.

9. How is Nitro-benzol prepared? Give its formula.

10. Explain the significance of the following equations :—

$$K_2CO_3 + 4C + 2N = 2KCN + 3CO.$$
$$NaC_2H_3O_2 + NaHO = CH_4 + Na_2CO_3.$$

FIRST YEAR EXHIBITIONS.

GREEK.

THUSDAY, SEPTEMBER 16TH:—MORNING 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Homer, Iliad, Bk. VI.:—

> Ἀνδρομάχη δέ οἱ ἄγχι παρίστατο δακρυχέουσα,
> ἐν τ' ἄρα οἱ φῦ χερὶ ἔπος τ' ἔφατ' ἔσ τ' ὀνόμαζεν
> "Δαιμόνει, φθίσει σε τὸ σὸν μένος οὐδ' ἐλεαίρεις
> παῖδά τε νηπίαχον καὶ ἔμ' ἄμμορον, ἢ τάχα χήρη
> σεῦ ἐσομαι. τάχα γάρ σε κατακτανέουσιν' Ἀχαιοὶ
> πάντες ἐφορμηθέντες· ἐμοὶ δέ κέ κέρδιον εἴη
> σεῦ ἀφαμαρτούσῃ χθόνα δύμεναι. οὐ γὰρ ἔτ' ἄλλη
> ἔσται θαλπωρὴ, ἐπεὶ ἂν σύγε πότμον ἐπίσπῃς,
> ἀλλ' ἄχε'· οὐδέ μοί ἐστι πατὴρ καὶ πότνια μήτηρ.
> ἦτοι γὰρ πατέρ' ἀμὸν ἀπέκτανε δῖος Ἀχιλλεὺς,
> ἐκ δὲ πόλιν πέρσεν Κιλίκων εὐναιετάωσαν,
> Θήβην ὑψίπυλον. κατὰ δ' ἔκτανεν Ἠετίωνα,
> οὐδέ μιν ἐξενάριξε, σεβάσσατο γὰρ τόγε θυμῷ,
> ἀλλ' ἄρα μιν κατέκηε σὺν ἔντεσι δαιδαλέοισιν
> ἠδ' ἐπὶ σῆμ' ἔχεεν. περὶ δὲ πτελέας ἐφύτευσαν
> νύμφαι ὀρεστιάδες, κοῦραι Διὸς αἰγιόχοιο.
> οἱ δέ μοι ἕπτὰ κασίγνητοι ἔσαν ἐν μεγάροισιν,
> οἱ μὲν πάντες ἰῷ κίον ἤματι Ἄϊδος εἴσω·
> πάντας γὰρ κατέπεφνε ποδάρκης δῖος Ἀχιλλεὺς,
> βουσὶν ἐπ' εἰλιπόδεσσι καὶ ἀργεννῇς ὀΐεσσιν.

2. (*a*) In ext. (A) show carefully the grammatical construction of the following words:—*οἱ*, vs. 1. *οἱ*, *χειρί*, vs. 2. *σεῦ*, vs. 7. *χθόνα*, ib. *Ἄϊδος*, vs. 18. *βουσίν*, vs. 20. (*b*) Point out instances of *Tmesis* in the above ext. (*c*) Explain the derivation and meaning of the following words:—*νηπίαχον*, *ἄμμορον*, *τάχα*, *ἀμόν*, *σῆμα*, *ἰῷ*, *ποδάρκης*, *εἰλιπόδεσσι*, *ἀργεννῇς*. (*d*) How does the Homeric use of *τάχα* differ from the Attic?

3. (*a*) Parse the following words, giving the principal parts of the verbs, and the *Nom. Sing.* and *Plu.* of the others:—*πῆξε*, *ἔσκεν*, *μίγη*, *ἔγχει*, *ἔθεν*, *κληῖδι*, *ἄλτο*, *δοῦρε*, *ἔσταν*, *φάν*. (*b*) Write down the name and scheme of the metre, and scan the first four verses of ext. (A).

4. Translate, Xenophon, Anabasis, Book V. :—

(B) Ἐπὶ τούτοις πιστὰ δόντες καὶ λαβόντες ᾤχοντο. καὶ ἦκον τῇ ὑστεραίᾳ ἄγοντες τριακόσια πλοῖα μονόξυλα καὶ ἐν ἑκάστῳ τρεῖς ἀνδρας, ὧν οἱ μὲν δύο ἐκβάντες εἰς τάξιν ἔθεντο τὰ ὅπλα, ὁ δὲ εἷς ἔμενε. Καὶ οἱ μέν, λαβόντες τὰ πλοῖα, ἀπέπλευσαν, οἱ δὲ μένοντες ἐξετάξαντο ὧδε. ἔστησαν ἀνὰ ἑκατὸν μάλιστα, οἷον χοροί, ἀντιστοιχοῦντες ἀλλήλοις, ἔχοντες γέρρα πάντες λευκῶν βοῶν δασέα, εἰκασμένα κιττοῦ πετάλῳ, ἐν δὲ τῇ δεξιᾷ παλτὸν ὡς ἐξάπηχυ, ἔμπροσθεν μὲν λόγχην ἔχον, ὄπισθεν δὲ αὐτοῦ τοῦ ξύλου σφαιροειδές. Χιτωνίσκους δὲ ἐνεδεδύκεσαν ὑπὲρ γονάτων, πάχος ὡς λινοῦ στρωματοδέσμου, ἐπὶ τῇ κεφαλῇ δὲ κράνη σκύτινα οἷάπερ τὰ Παφλαγονικά, κρώβυλον ἔχοντα κατὰ μέσον, ἐγγύτατα τιαροειδῆ. εἶχον δὲ καὶ σαγάρεις σιδηρᾶς.

(C) Καὶ τούτους τί δοκεῖτε; ἠδίκουν μὲν οὐδέν, ἐδεισαν δὲ μὴ λύττα τις ὥσπερ κυσὶν ἡμῖν ἐμπεπτώκοι. εἰ οὖν ταῦτα τοιαῦτα ἐσται, θεάσασθε οἵα ἡ κατάστασις ἡμῖν ἔσται τῆς στρατιᾶς. Ὑμεῖς μὲν οἱ πάντες οὐκ ἔσεσθε κύριοι οὔτε ἀνελέσθαι πόλεμον ᾧ ἂν βούλησθε οὔτε καταλῦσαι, ἰδίᾳ δὲ ὁ βουλόμενος ἄξει στράτευμα ἐφ' ὅ, τι ἂν θέλῃ. κἂν τινες πρὸς ὑμᾶς ἴωσι πρέσβεις ἢ εἰρήνης δέομενοι ἢ ἄλλου τινός, κατακανόντες τούτους οἱ βουλόμενοι ποιήσουσιν ὑμᾶς τῶν λόγων μὴ ἀκοῦσαι τῶν πρὸς ὑμᾶς ἰόντων. Ἔπειτα δὲ οὓς μὲν ἂν ὑμεῖς ἅπαντες ἕλησθε ἄρχοντας, ἐν οὐδεμιᾷ χώρᾳ ἔσονται, ὅστις δ' ἂν ἑαυτὸν ἕληται στρατηγὸν καὶ ἐθέλῃ λέγειν, Βάλλε, βάλλε, οὗτος ἔσται ἱκανὸς καὶ ἄρχοντα κατακανεῖν καὶ ἰδιώτην ὃν ἂν ὑμῶν ἐθέλῃ ἀκριτον, ἣν ὡσιν οἱ πεισόμενοι αὐτῷ, ὥσπερ καὶ νῦν ἐγένετο.

5. Translate the following single passages :—(1) Τὸ κινεῖσθαι καὶ ἀνδίζεσθαι παρεῖχε θερμασίαν τινὰ καὶ ὑγρότητα. Explain the force of the two infinitives. (2) Μὰ Δία οὔτε τούτοις ἐπικουρεῖτε, οὔτε σὺν ἐμοὶ τὸν ἀτακτοῦντα ἐπαίετε. (3) Ἐν ἀνδραπόδων χώρᾳ ἐσόμεθα. (4) Ἀλλὰ γάρ, ὁπόταν γαλήνη ᾖ, ἐμβιβῶ.

6. (*a*) Parse πλευσούμεθα, καθίστασαν, ἀνέκραγον, προδραμόντες, ἀπαγαγεῖν, τετρωμένος. (*b*) Derive αἰχμαλώτων, νεωκόρῳ, ἐπέψηφισε, καταγνωσθέντας, σωφρονῆτε.

7. Translate, Demosthenes, Contra, Aphobus, II. :—

(D) Πάντων δ' ἀτοπώτατόν ἐστι, λέγοντας, ὡς ὁ πατὴρ οὐκ εἶα μισθοῦν τὸν οἶκον, τὴν μὲν διαθέκην μηδαμοῦ ταύτην ἀποφαίνειν, ἐξ ἧς ἦν εἰδέναι τἀκριβές, τηλικαύτην δ' ἀνελόντας μαρτυρίαν, οὕτως οἴεσθαι δεῖν εἰκῇ πιστεύεσθαι παρ' ὑμῖν. ἀλλ' ἐχρῆν, ἐπειδὴ τάχιστ' ἐτελεύτησεν ὁ πατήρ, εἰσκαλέσαντας μάρτυρας πολλούς, παρασημήνασθαι κελεῦσαι τὰς διαθήκας, ἵν', εἴ τι ἐγίγνετο ἀμφισβητήσιμον, ἦν εἰς τὰ γράμματα ταῦτ' ἐπανελθεῖν, καὶ τὴν ἀλήθειαν πάντων εὑρεῖν. νῦν δ' ἕτερα μὲν παρασημήνασθαι ἠξίωσαν, ἐν οἷς πολλὰ τῶν καταλειπομένων οὐκ ἐγέγραπτο, ὑπομνήματα δ' ἦν. αὐτὴν δὲ τὴν διαθήκην, δι' ἧς τούτων, ὧν ἐσημήναντο, γραμμάτων καὶ τῶν ἄλλων ἁπάντων χρημάτων ἐγίγνωντο

κύριοι, καὶ τοῦ μὴ μισθοῦν τὸν οἶκον τῆς αἰτίας ἀπελέλυντο, ταύτην δ' οὐκ ἐσημήναντο, οὐδ' αὐτὴν ἀπέδοσαν. ἀξιόν γε πιστεύειν αὐτοῖς, ὅ τι ἂν περὶ τούτων λέγωσιν.

8. (*a*) What was the occasion of the delivery of these speeches by Demosthenes? (*b*) Explain in short notes the meaning of the following technical phrases:—(1) *ἀνδρες δικασταί*. (2) *εἰς ἀγῶνα καθίστασθαι*. (3) *διὰ τὴν ἡλικίαν*. (4) *τὴν ψῆφον ἐνεγκεῖν*. (5) *κατὰ τὴν διαθήκην*. (6) *τὴν προῖκα*. (7) *ἡ οὐσία—τἀρχαῖα*. (8) *ὁ ἐπίτροπος*. (9) *λειτουργῶν*. (10) *πίστεις*. (*b*) Give the values in Sterling, or our own currency, of:—the *ὀβολός*, *δραχμή*, *μνά*, and *τάλαντον*.

LATIN.

THURSDAY, SEPTEMBER 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Cicero, In Catilinam:—

(A) Magna dis immortalibus habenda est atque huic ipsi Iovi Statori, antiquissimo custodi huius urbis, gratia, quod hanc tam taetram, tam horribilem tamque infestam rei publicae pestem totiens, iam effugimus. Non est saepius *in uno homine* summa salus periclitanda rei publicae. Quam diu mihi consuli designato, Catilina, insidiatus es, non publico me praesidio, sed privata diligentia defendi. Quum proximis comitiis consularibus me consulem in campo et competitores tuos interficere voluisti, compressi conatus tuos nefarios amicornm praesidio et copiis, nullo tumultu publice concitato: denique, quotienscumque me petisti, per me tibi obstiti, quamquam videbam perniciem meam cum magna calamitate rei publicae esse coniunctam.

(B) Quibus ego confido impendere fatum aliquod et poenam iamdiu improbitati, nequitiae, sceleri, libidini debitam aut instare iam plane aut certe appropinquare. Quos si meus consulatus, quoniam sanare non potest, sustulerit, non breve nescio quod tempus, sed multa saecula propagarit rei publicae. Nulla est enim natio quam pertimescamus, nullus rex qui bellum populo Romano facere possit. Omnia sunt externa *unius virtute* terra marique pacata: domesticum bellum manet, intus insidiae sunt, intus inclusum periculum est, intus est hostis. Cum luxuria nobis, cum amentia, cum scelere certandum est. Huic ego me bello ducem profiteor, Quirites: suscipio inimicitias hominum perditorum.

2. (*a*) Explain the personal references of the words in Italies in the above extt. (*b*) *Ante diem duodecimum kalendas Novembris*:—Explain the construction, and state which noun the preposition *ante* governs:—What part of speech and what case is Novembris? Name the divisions of the Roman month, and the days on which they respectively commenced. To what day of what month, according to our mode of reckoning, does the above-mentioned day correspond?

3. Translate, with an explanatory note, grammatical or other, the following exit:—(1) Loco ille motus est. (2) Tongilium mihi eduxit. (3) Præ Gallicanis legionibus. (4) Magno in aere alieno majores etiam possiones habent. (5) Me usso togato duce et imperatore sedetur. (6) Inter falcarios. (7) Exhaurietur ex urbe tuorum magna sentina reipublicae.

4. Translate:—(C) Caesar, Bellum Britannicum:—

Ipse cum omnibus copiis in Morinos proficiscitur, quod inde erat brevissimus in Britanniam trajectus. Huc naves undique ex finitimis regionibus et quam *superiore aestate* ad Veneticum bellum effecerat classem jubet convenire. Iterim *consilio* ejus *cognito* et per mercatores perlato ad Britannos, a compluribus insulae civitatibus ad eum legati veniunt qui polliceantur obsides dare atque *imperio* populi Romani obtemperare. Quibus auditis liberaliter pollicitus hortatusque ut in ea sententia permanerent eos *domum* remittit, et cum iis una Commium, quem ipse Atrebatibus superatis regem ibi constituerat, cujus et virtutem et consilium probabat et quem sibi fidelem esse arbitrabatur, cuiusque auctoritas in his regionibus *magni* habebatur, mittit. *Huic* imperat quas possit adeat civitates horteturque ut populi Romani fidem sequantur, seque celeriter eo venturum nuntiet.

5. (*a*) Explain the use of the oblique cases printed in Italics in ext. (*C*). (*b*) Obsides *dare*:—What would be the more usual construction? (*c*) *Permanerent polliceantur, adeat*:—Explain the use of the mood and of the tenses, in these several instances.

6. (*a*) Explain as accurately as youican the following geographical references, giving modern names where you can:—Veneticum bellum, Atrebates, Ad portum Itium, Treveri, Silvam Arduennam, Trinobantes, Remi, Mona, Senones. (*b*) Write short explanatory notes on;—tertia vigilia, hora quarta, aestus maximos, fabros delegit, essedarii.

7. Translate:—(D) Virgil, Æneid, Bk. I.:—

Inde lupae fulvo nutricis tegmine laetus
Romulus excipiet gentem, et Mavortia condet
moenia, Romanosque suo de nomine dicet.
His ego nec metas rerum nec tempora pono:
imperium sine fine dedi. Quin aspera Iuno,
quae mare nunc terrasque *metu* coeluraque fatigat,
consilia in melius referet, mecumque fovebit
Romanos, rerum dominos, gentemque togatam.
Sic *placitum*. Veniet *lustris labentibus* aetas,
quum domus Assaraci Phthiam clarasque Mycenas
servitio premet, ac *victis* dominabitur *Argis*.
Nascetur pulchra Troianus origine Caesar,
imperium Oceano, famam qui terminet astris;
Iulius, a magno demissum nomen Iulo.

Hunc tu olim *coelo*, spoliis Orientis onustum,
accipies secura; vocabitur hic quoque votis.
Aspera tum positis mitescent seculo bellis.
Cana Fides, et Vesta, Remo cum fratre Quirinus,
iura dabunt; diræ ferro et compagibus arctis
claudentur Belli portae.

8. Parse the following verbs:—imperasset, abutere, peperit, passus, inusta, adulta, prostratus, perculsum, profuderunt, memineritis, manavit, obtigerit, decreta, incidimus.

9. Explain the composition and derivation of the following words, giving also the cognate forms in Greek and English of such as have them:—Consul, provincia, sellae, lectulum, taberna, nudiustertius, contionem, praeceps, statua, simulacra, debiles, popina.

10. State the difference in meaning between,—(1) *Locare* aliquid ad faciendum and *conducere* aliquid ad faciendum. (2) Rem *referre* ad senatum and rem *deferre* ad senatum. (3) *Caesaris* similes and *Caesari* similes.

GRAMMAR AND COMPOSITION.

MONDAY, SEPTEMBER 20th:—AFTERNOON, 2 TO 5.

Examiner,.....REV. DR. CORNISH.

1. (*a*) Distinguish between the *Root* and *Stem* of a word. (*b*) Point out the stem of ὄρνις, γάλα, ἀνήρ, κόραξ, γυνή, παῖς, respectively. (*c*) Write down the *Dative Plural* of these words. (*d*) Give the Greek for:—"The same man;" "the boy himself;" "we two;" "ye two;" "my father;" "your (plu.) mother;" "their brother."

2. (*a*) What are the Augments? Give the chief rules respecting them. (*b*) Write down the Imperfect (1st Sing. Ind.) of ὁράω, αἐρέω, ἕπομαι, ἐάω. (*c*) Derive and define the term Aorist. When would you employ the Aorist, Perfect and Imperfect, respectively? (*d*) Enumerate the Tense-stems, and the tenses formed from each. How do you find the stem of a word?

3. (*a*) How many Declensions are there in Latin, and how are they severally characterized and distinguished? (*b*) How many classes of Numerals are there? Write down the first five numerals in all classes.

4. (*a*) Decline (in combination) in both singular and plural, *uterque consul, audax facinus, nix alba, altera domus.* (*b*) Write down the comparative and superlative of *pulcher, facilis, nequam, frugi, ultra, extra.* (*c*) Give the Perfect Ind. (1st Sing.), Supine, and Pres. Infinitive of *edo, lavo, vendo, audeo, fingo, figo.* (*d*) Give the Future Infinitives, Active and Passive, of *deligo, do, exerceo.*

5. (*a*) Express in Latin:—"At Rome, at Carthage, at Gades, at Athens." What is the case used? (*b*) Assign their respective cases to the following:—*patiens, memor, captus, egeo, parco, nosco.* (*c*) Explain the formation of the following compounds:—aufero, occupo, cogo, collega, praesidium, securus.

(A) Translate into Greek :—1. He that loves not his father and mother is a bad citizen. 2. The king was pleased with those who managed well the affairs of the State, but annoyed at the wicked being prosperous. 3. The general and his soldiers marched into the enemy's country and laid waste the greater part of it. 4. Let us pursue what is good, but shun what is bad; for this is disgraceful, whilst that is honourable. 5. The same things are not always in the power of the same men. 6. The king himself will treat the citizens well.

(B) Translate into Latin :—1. Hannibal, the Carthaginian general, defeated the Romans at the battle of Cannae, and his troops acquired great booty. 2. The river Euphrates flowed through the midst of Babylon, a city very magnificent, very rich, and very famous in ancient times. 3. It is the duty of parents to teach their children justice, temperance, filial affection, and a love of truth, in order to their becoming good citizens. 4. We ought not to put confidence in bad men; but those who are wiser and better than ourselves should be trusted by us. 5. We should always prefer what is right to that which is expedient only. 6. He made answer that it was pleasant to confer benefits upon the good. 7. He was born at Athens; lived a short time at Corinth; went thence to Thebes, and died there. 8. I fear that he is going to conceal these things from his parents, and that they will not find them out.

EUCLID.

FRIDAY, SEPTEMBER 17TH :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL D.

1. Construct an isosceles triangle such that each of the angles at the base shall be double the vertical angle.

a. If the length of the side be *l*, find the length of the base.

2. If any chord of a circle be intersected by a diameter the rectangles under the segments of the two lines are equal.

3. The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles.

a. If the sum of the opposite angles of a given quadrilateral be equal to two right angles, it may be inscribed in a circle.

4. The sum of the squares of the sides of any quadrilateral exceeds the sum of the squares of the diagonals by four times the square of the line joining the middle points of the diagonals.

5. Construct a square that shall be equal to a given rectilineal figure.

6. The area of any triangle is equal to half the rectangle under the base and the perpendicular let fall from the vertex on the base.

*7. Find a mean proportional between two given lines.

*8 If a right line be drawn parallel to the base of a triangle it cuts the sides into proportional segments.

**Extra questions.*

ALGEBRA AND ARITHME IC.

FRIDAY, SEPTEMBER 17TH:—AFTERNOON, 2 TO 5.

Examiner, ...ALEXANDER JOHNSON, LL.D.

1. The sum of 15 terms of an arithmetic series is 600, and the common difference is 5; find the first term.

2. Insert two harmonic means between 6 and 24.

3. Find the arithmetical, geometric and harmonic means between $3\frac{3}{8}$ and $1\frac{1}{2}$.

4. There are three numbers in geometrical progression; the sum of the first and second exceeds the third by 1, and three times the second is equal to twice the third;—find the numbers.

5. The differences between the hypotenuse and each of the two sides of a right-angled triangle are 3 and 6 feet respectively;—find the sides.

6. Solve the equations:—

(*a*) $\sqrt{a^2+x^2}+\sqrt{a^2-x^2}=b$;

(*b*) $x-y=1$; $x^3-y^3=19$;

(*c*) $\dfrac{10x+17}{18}-\dfrac{12x+2}{11x-8}=\dfrac{5x-4}{9}$;

(*d*) $\dfrac{x+2}{x-1}-\dfrac{4-x}{2x}=2\frac{1}{3}$;

(*e*) $x-\dfrac{y-2}{7}=5$; $4y-\frac{1}{3}(x+10)=3$.

7. Reduce to its simplest form—

$$\frac{x+y}{y}-\frac{2x}{x+y}+\frac{x^2y-x^3}{x^2y-y^3}.$$

8. Find the greatest common measure of $x^3+x^2y+xy^2+y^3$ and $x^4+x^3y+xy^3-y^4$.

9. Extract the square root of 28·8369.

10. In what time will \$1,286 amount to \$1,574 at $3\frac{1}{2}$ per cent. per annum simple interest?

11. Add together $1\frac{1}{2}+3\frac{1}{4}-\frac{3}{5}$, and divide the sum by half the difference between $4\frac{2}{3}$ and $\frac{5}{6}$.

12. Find the least common multiple of 1, 3, 5, 7, 9, 11 and 15.

13. Find a fourth proportional to 3·81, ·085 and ·0023.

ENGLISH GRAMMAR.

MONDAY, SEPTEMBER 20TH :—MORNING, 9 TO 12-30.

Examiners,..... { CHAS. E. MOYSE, B.A.
P. T. LAFLEUR, B.A.

FIRST YEAR.

1. Are the following nouns singular or plural: Riches, alms, wages, summons? Support your opinion by argument.

2. What are the various uses of the pronoun *it*?

3. Write the rules for the use of the possessive case.

4. To what inflections is the verb subject? Explain and illustrate each kind of inflection in the case of the verb "call."

5. Write a list of comparatives which want the positive.

6. Point out clearly the errors in each of the following:—

(*a*) "The boy stood on the burning deck
Whence all but he had fled."

(*b*) When a person acts thus, they should suffer for it.

(*c*) Who are you going to give that to?

7. Distinguish carefully between the attributive relation and the predicative relation of the adjective.

8. When do we properly use the comma in punctuation? Illustrate by example.

9. Make the proper distinctions in the use of *shall* and *will*, and point out some errors frequently made in the employment of these verbs.

10. Analyse minutely the following sentences, and parse every word in the first one:—

(*a*) Here the speaker drew himself up with a dignified air and attempted to frown down his opponent.

(*b*) Then I told how she used to sleep by herself in a lone chamber of the great lone house; and how she believed that an apparition of two infants was to be seen at midnight gliding up and down the great staircase near where she slept, but she said "those innocents would do her no harm."

(*c*) Accordingly, during the five years which followed the departure of Clive from Bengal, the misgovernment of the English was carried to such a point as seems hardly compatible with the very existence of society.

ENGLISH COMPOSITION.

Write an essay of not less than a page and a half in length on *one* of the following subjects:—

(*a*) A Summer Vacation.

(*b*) Home.

(*c*) A Great Man.

SECOND YEAR.

(N.B.—Besides the following questions candidates are also required to answer numbers (2), (3), (7), (9) and (10) on the paper for the first year candidates.)

(A) Make grammatical notes on the expressions: The king is gone *a*-hunting; the more the better; full many a flower; songstress.

(B) What are Barbarism, Solecism, Metomymy, Onomatopœia.

(C) Write four noun-endings of Anglo-Saxon origin, and shew by means of examples the force of each one.

(D) What is meant by the term "Apposition." Give full illustration of your definition.

(E) What are the principal sources of the English language, and in what proportion do we find derivative words from them?

ENGLISH LITERTURE.

Shakspere, *Coriolanus.*

MONDAY, SEPT. 20TH:—AFTERNOON, 2 TO 5.

Examiners,..... { CHAS. E. MOYSE, B.A. / P. T. LAFLEUR, B.A.

1. Sketch the plot of the play.

2. What "tale" does Menenius Agrippa tell, and how does he apply it?

3. Of whom does Menenius Agrippa ask "What is granted them?" and how is he answered?

4. What does Coriolanus beg of "my lord general"?

5. Notice the leading features of Cominius's account of the career of Coriolanus, in presence of the Senate.

6. (*a*) Write notes on the following words: bale, cranks, physical, debile, kam.

(*b*) Choose other five words which are noteworthy and explain them. Say where each occurs.

7. Select from different Scenes in the play six allusions which require explanation. Explain them and refer each to its connection.

8. Notice peculiarities in Shakspere's use of verbs, pronouns and conjunctions, and quote from the play in illustration.

9. What do you know about the measure called blank verse? What peculiarities have you noticed in Shakspere's blank verse? Illustrate from the play.

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SCOTT EXHIBITIONS.

THIRD YEAR.

ENGLISH LITERATURE.

Macaulay, Hist. Vol. I., cap. I., Scott, *Lady of the Lake.*

TUESDAY, SEPTEMBER 21ST:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A

1. Give the substance of Macaulay's remarks on:

(*a*) Differences between the Saxons of England and the Teutons of the Continent.

(*b*) English conquests on the Continent.

(*c*) The power of Elizabeth over the Church.

(*d*) The impeachment of the five members.

(*e*) The Proctectorate of Oliver Cromwell.

2. Name—or (preferably), mark on a rough map—the more important places mentioned in the Lady of the Lake, and write short notes on each, telling what happened there.

3. Describe:

(*a*) The lodge on the island.

(*b*) The procession of the barges.

(*c*) The course of the poem after the Combat.

4. Give the meaning of ptarmigan, glozing, enow, strath, cabala, crosslet, swathe, coif-clad, mavis.

5. Quote from the poem some passage of not less than fifteen lines in length, which you think especially fine.

MATHEMATICS.

FRIDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. A circle of radius 4 has the origin at its centre. Find the equations of tangents at the extremities of a diameter which makes an angle of 120° with the positive direction of the axis of x.

2. Obtain a formula for the distance of a given point from the line $Ax + By + C = o$.

3. The equation $7x + y = 50$ is that of a chord of the circle $x^2 + y^2 = 100$; what is the equation of a circle which has this chord for diameter?

4. Given the base and the ratio of the sides of a triangle, find the locus of the vertex.

5. Find the equation of the tangent and that of the normal at a given point on the parabola $y^2 = 2mx$.

6. From the points where the minor axis of an ellipse is cut by the circle on the major axis, tangents are drawn to the ellipse; show that the points of contact are the extremities of the latera recta.

7. Show that

(1) $d(1 + 2x^2)(1 + 4x^3) = 4x(1 + 3x + 10x^3)\,dx$.

(2) $d \log \sqrt{\frac{1+x}{1-x}} = \frac{dx}{1-x^2}$,

(3) $\mathrm{d}(\tan x - x) = \tan^2 x\,dx$,

(4) $d \tan^{-1} \frac{2x}{1-x^2} = \frac{2\,dx}{1+x^2}$.

8. Expand $\log(1 + x)$ into a series.

9. Show that axis of the maximum parabola which can be inscribed in a given isosceles triangle is three-fourths of the altitude of the triangle.

10. Integrate $(1 + \tan^2 x)\,dx$, $3x^{-1}\,dx$, $\frac{x\,dx}{1+x^4}$, and $\frac{2x\,dx}{(1+x^2)^2}$.

MECHANISM.

SEPTEMBER 20TH, 1886:—9 TO 11 A.M.

Examiner,.....C. H. MCLEOD, MA.E.

1. For a given crank and connecting rod, construct a diagram of velocity ratios for all positions of the crank.

2. Sketch, to scale, a heart-shaped cam giving *uniform* motion to a vertical rod.

3. In Watts parallel motion given.—$s = 60$ in., $r = 90$ in., $\theta = 11°.5$; find the deviation of the parallel point. (ϕ may be obtained graphically)

4. In an epicyclic train, the wheels A B C have respectively 30, 40 and 50 teeth. The arm revolves 3 times and A revolves 5 times per minute. (*a*) How many revolutions does B make when the arm and A turn in the same direc-

tion? (*b*) How many revolutions does *C* make when the arm and *A* turn in opposite directions? Obtain your answers, first by the formula and afterwards by following the movements in detail.

5. Sketch and explain the action of:—(*a*) the fusee used in English watches. (*b*) The going fusee used in good clocks. (*c*) A double eccentric for reversing an engine.

SECOND YEAR.

ENGLISH LITERATURE.

Macaulay, Hist., Vol. I., cap. i. Shakespere, *Tempest.*

TUESDAY, SEPT. 21ST:—MORNING, 9 TO 12.

Examiner,..... .....CHAS. E. MOYSE, B.A.

A. The questions on Macaulay are the same as those of the Third Year Paper.

B. 1. From what sources did Shakespere derive material for the Tempest?

2. What can you gather from the play regarding Caliban's appearance and character?

3. Refer each of the following extracts to its speaker, and say in what connection it occurs:

(*a*) I would fain die a dry death.

(*b*) Foot it featly here and there.

(*c*) My strong imagination sees a crown dropping upon thy head.

(*d*) I have no long spoon.

(*e*) ———some kinds of baseness
Are nobly undergone.

(*f*) Wit shall not go unrewarded while I am king of this country.

(*g*) I'll drown my book.

4. Sketch the outline of that important scene in the play with which you are most familiar.

5. Comment on the following:—yarely, brave, Argier, mo, inch-meal, deboshed, each putter-out of five for one, goss, stale, admire.

6 Quote the passage beginning, "These, our actors, As I foretold you.

SENIOR MATRICULATION.

MATHEMATICS (*First Paper*).

FRIDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examinner,.....G. H. CHANDLER, M.A

1. An imperial gallon contains 277·274 cubic inches, and a litre contains 61·027 cubic inches; express a litre as a decimal of a gallon.

2. Reduce the fraction

$$\frac{x^4 + a^2 x^2 + a^4}{x^4 + a x^3 - a^3 x - a^4}$$

to its lowest terms.

3. Find all the factors of $x^8 - y^8$, $x^2 + 2x - 15$, $a^3 - a^2 x - 6 a x^2$, and $a^4 + a^2 x^2 + x^4$.

4. Solve the equations:

$$\frac{5x}{x+4} - \frac{3x-2}{2x-3} = 2$$

$$\left\{ \begin{array}{c} 2(x-y) = 3z - 2 \\ x + 1 = 3(y+z) \\ 2x + 3z = 4(1-y). \end{array} \right\}$$

5. Show that the continued product of $3\sqrt{8}$, $2\sqrt[3]{6}$, and $3\sqrt[4]{54}$ is $216\sqrt[12]{6}$.

6. Divide a straight line into two parts so that the rectangle contained by the whole and one of the parts may be equal to the square on the other part.

7. If two straight lines intersect within a circle the rectangle contained by the segments of one of them shall be equal to the rectangle contained by the segments of the other.

8. On a given straight line describe a figure similar to a given rectilineal figure.

9. If two straight lines in one plane are parallel to two straight lines in another plane, the first two and the other two shall contain equal angles.

10. Find the tangent of 30°, the cosine of 60° and the sine of 18°.

11. Show that

(1) $\sec^2 A - 1 = \sin^2 A \sec^2 A$,

(2) $\cos(A - B) = \cos A \cos B + \sin A \sin B$,

(3) $\cos A = 2\cos^2 \frac{A}{2} - 1$,

(4) $\frac{1 - \cos A}{\sin A} = \tan \frac{A}{2}$.

SENIOR MATRICULATION.

MATHEMATICS (*Second Paper*).

FRIDAY, SEPTEMBER 17TH:—AFTERNOON, 2 TO 5.

Examiner, ... G. H. CHANDLER, M.A.

1. In any triangle

$$\sin \frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{b\,c}}.$$

2. Solve the triangles in which

(1) $a = 221$, $b = 149$, $C = 30° 40' 35''$;

(2) $b = 149$, $A = 69° 59' 2''.5$, $C = 70° 42' 30''$;

(3) $a = 565$, $b = 445$, $c = 606$.

3. Find the area of the first triangle.

4. From the lower window of a house the angle of elevation of a tower is 45°; from a window 20 feet above the other it is 40°. How far is the house from the tower?

JUNIOR MATRICULATION.

MATHEMATICS.

FRIDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiner, ... G. H. CHANDLER, M.A.

1. Resolve $x^4 - y^4$, $x^4 - 2\,b\,x^3 + b^2 x^2$, $x^2 - 8\,x - 9$, and $3\,x^2 - 2\,x - 5$ into elementary factors.

2. What is the square root of $16\,x^4 - 16\,a\,b\,x^2 + 16\,b^2 x^2 + 4\,a^2 b^2 - 8\,a\,b^3 + 4\,b^4$?

3. Find the greatest common measure of $x^4 + 7\,x^3 + 7\,x^2 - 15\,x$ and $x^3 - 2\,x^2 - 13\,x + 110$.

4. Find the roots of the equations :

(1) $$\frac{1}{a\,(b-x)}+\frac{1}{b\,(c-x)}=\frac{1}{a\,(c-x)},$$

(2) $$\frac{6\,x+13}{15}-\frac{3\,x+5}{5\,x-25}=\frac{2\,x}{5},$$

(3) $$\left\{\begin{array}{c} x-\frac{1}{7}\,(y-2)=5 \\ 4\,y-\frac{1}{3}\,(x+10)=3. \end{array}\right\}$$

5. If two angles of a triangle are equal, the triangle is isosceles.

6. Draw a straight line through a given point parallel to a given straight line.

7. If a straight line be divided into any two parts, the squares on the whole line and on one of the parts, are equal to twice the rectangle contained by the whole and that part together with the square on the other part.

8. If a straight line drawn through the centre of a circle bisect a straight line in it which does not pass through the centre, it shall cut it at right angles, and if it cut it at right angles it shall bisect it.

9. From a given point draw a tangent to a given circle.

10. Find the number of cubic inches in a gallon (*i.e.* 10 lbs. avoirdupois) of water, one cubic inch weighing $252\frac{1}{2}$ grains.

11. What sum at 4 per cent. per annum simple interest will amount to $1200 in 4 yrs. 3 mos. ?

12. Add $2\frac{1}{2}$, $3\frac{1}{4}$, and $5\frac{1}{5}$, and substract $1\frac{7}{8}$ from the sum.

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MATRICULATION EXAMINATION.

LATIN.

Examiner,..... .....H. ASPINWALL HOWE, M.A., LL.D.

NOTE.—Candidates may choose, in this Paper, between Cicero and Virgil.

1. Translate, w*ithout unnecessary change of construction*:—

(A) Etenim quid est, Catilina, quod jam amplius exspectes, si neque nox tenebris obscurare cœtus nefarios, nec privata domus parietibus continere vocem conjurationis tuæ potest? si illustrantur, si erumpunt omnia? Muta jam istam mentem: mihi crede, obliviscere cædis atque incendiorum. Teneris undique: luce sunt clariora nobis tua consilia omnia, quæ etiam mecum licet recognoscas. Meministine, me ante diem xii. Kalendas Novembr. dicere in senatu, certo die fore in armis, qui dies futurus esset ante diem vi Kal. Novembris, C. Manlium, audaciæ satellitem atque administrum tuæ? Num me fefellit, Catilina, non modo res tanta, tam atrox, tam incredibilis, verum, id quod multo magis est admirandum, dies? Dixi ego idem in senatu, cædem te optimatium contulisse in ante diem v. Kalendas Novembris, tum quum multi principes civitatis Roma non tam sui conservandi, quam tuorum consiliorum reprimendorum caussa profugerunt.

(B) O conditionem miseram non modo administrandæ verum etiam conservandæ reipublicæ! Nunc, si L. Catilina consiliis laboribus periculis meis circumclusus ac debilitatus subito pertimuerit, sententiam mutaverit, deseruerit suos, consilium belli faciundi abjecerit, ex hoc cursu sceleris et belli iter ad fugam atque in exsilium converterit, non ille a me spoliatus armis audaciæ, non obstupefactus ac perterritus mea diligentia, non de spe conatuque depulsus, sed indemnatus, innocens in exsilium ejectus a consule vi et minis esse dicetur, et erunt, qui illum, si hoc fecerit, non improbum, sed miserum, me non dili gentissimum consulem, sed crudelissimum tyrannum existimari velint! Est mihi tanti, Quirites, hujus invidiæ falsæ atque iniquæ tempestatem subire, dummodo a vobis hujus horribilis belli ac nefarii periculum depellatur.

2. Parse fully all the words of the sentence "Muta jam istam mentem: mihi crede, obliviscere cœdis atque incendiorum."

3. Decline *istam mentem*, *scelus* and *iter*. Write out the tenses *dicetur* and *fecevit*.

4. Give the principal parts, marking the quantity of the penultimate syllable of each part of the verbs *erumpunt*, *obliviscere*, *fefellit*, *contulisse*, *deseruerit*, *desinam*, *abjecerit*, *depellatur*.

5. Write, with English meaning attached, the first person singular of all the tenses, naming them, of the Indicative and Subjunctive Moods, Active Voice, of the verb *erumpo*, stating how each is formed. Also the Infinitive Mood.

6. What is the Rule for forming the Comparative and Superlative of Adjectives. Give an example in an Adjective of the 3rd declension, and add some examples of irregular comparison.

7. What is the derivation of *cœtus*, *incendium*, *recognosco*, *audacia*, *incredibilis*, *principes*, *obstupefactus?* Give the meaning of each component part.

8. Explain:—

(*a*) Obliviscere *cœdis atque incendiorum*. What is the Rule for these genitives?

(*b*) Non tam *sui conservandi*. What construction is this? Parse *sui*.

(*c*) *Me tyrannum* existimari velint. Distinguish between the two accusatives *me* and *tyrannum*.

(*d*) Est mihi *tanti*. Give in full the Rule for case of the word signifying price or value. Give an example of the Rule and of the exception.

VIRGIL.

1. Translate, *without unnecessary change of construction*:—

(A) Eripiunt subito nubes cœlumque diemque
Teucrorum ex oculis; ponto nox incubat atra.
Intonuere poli, et crebris micat ignibus æther;
Præsentemque viris intentant omnia mortem.
Extemplo Æneæ solvuntur frigore membra;
Ingemit, et duplices tendens ad sidera palmas,
Talia voce refert: "O terque quaterque beati,
Queis ante ora patrum Trojæ sub mœnibus altis
Contigit oppetere! o Danaum fortissime gentis
Tydide, mene Iliacis occumbere campis
Non potuisse, tuaque animam hanc effundere dextra!
Sævus ubi Æacidæ telo jacet Hector, ubi ingens
Sarpedon; ubi tot Simois correpta sub undis
Scuta virum galeasque et fortia corpora volvit."

(B) "Quisquis es, haud, credo, invisus cœlestibus auras
Vitales carpis, Tyriam qui adveneris urbem.

Perge modo, atque hinc te reginæ ad limina perfer.
Namque tibi reduces socios classemque relatam
Nuncio, et in tutum versis Aquilonibus actam,
Ni frustra augurium vani docuere parentes.
Aspice bis senos lætantes agmine cyenos,
Ætheria quos lapsa plaga Jovis ales aperto
Turbabat cœlo ; nunc terras ordine longo
Aut capere, aut captas jam despectare videntur:
Ut reduces illi ludunt stridentibus alis,
Et cœtu cinxere polum, cantusque dedere,
Haud aliter puppesque tuæ pubesque tuorum
Aut portum tenet, aut pleno subit ostia velo.
Perge modo, et, qua te ducit via, dirige gressum."

2. Parse fully each word of the sentence, 'Perge modo et, qua te ducit via, dirige gressum.'

3. Decline *nox atra*, *nubes* and *portus*, and write out the tenses *solvuntur adveneris*.

4. Give the principal parts of the verbs *eripiunt*, *solvuntur*, *effundere*, *perge*, *perfer*, *aspice*, *cinxere*, *dirige*. Mark the quantity of the penultimate syllable of the Perfects, Infinitives Present, and Supines.

5. Write with English meaning the 1st Pers. Sing. of all the Tenses, naming them, of the Indic. and Subj., Active Voice, of the verb *effundo*, stating how each is formed. Also the Infinitive Mood.

6. What is the Rule for forming the Comparative and Superlative of Adjectives ? Give an example in an adjective of the 3rd declension, and add some examples of irregular comparison.

7. What is the derivation of *subito*, *duplices*, *mœnibus*, *augurium*, *agmen*, *reduces*, *cœtus*, and *ostium* ? Give the meaning of each component part.

8. Explain :—

(*a*) *me*ne Iliacis occumbere campis, Non potuisse. Why is *me* accusative ?

(*b*) Tyriam qui *adveneris* urbem. In what tense and mood is the verb and why ?

(*c*) Aspice bis *senos*.....Numerals are classified under four or five heads. Name these and give all the forms for *senos*, with the particular meaning of each form.

(*d*) Ni frustra *augurium* docuere. What is the complete construction of *doceo* and similar verbs ?

LATIN.

Examiner,.....H. Aspinwall Howe, M.A., LL.D.

1. Translate, *without unnecessary change of construction* :—

His rebus pace confirmata, post diem quartum, quàm est in Britanniam ventum, naves octodecim, de quibus suprà demonstratum est, quæ equites sustulerant, ex superiore portu leni vento solverunt. Quæ quum appropin-quarent Britanniæ, et ex castris viderentur, tanta tempestas subito coorta est, ut nulla earum cursum tenere posset, sed aliæ eodem, unde erant profectæ, referrentur; aliæ ad inferiorem partem insulæ, quæ est propius solis occasum, magno sui cum periculo dejicerentur: quæ tamen ancoris jactis, quum fluctibus complerentur, necessario adversa nocte in altum provectæ continentem petierunt.

Equites hostium essedariique acriter prœlio cum equitatu nostro in itinere conflixerunt, tamen ut nostri omnibus partibus superiores fuerint, atque eos in silvas collesque compulerint: sed, compluribus interfectis, cupidiùs insequuti nonnullos ex suis amiserunt. At illi, intermisso spatio, imprudentibus nostris atque occupatis in munitione castrorum, subito se ex silvis ejecerunt, impetuque in eos facto, qui erant in statione pro castris collocati, acriter pugnaverunt: duabusque submissis cohortibus a Cæsare, atque his primis legionum duarum, quum hæ, perexiguo intermisso loci spatio inter se, constitissent, novo genere pugnæ perterritis nostris, per medios audacissimè perruperunt, seque inde incolumes receperunt.

2. Parse fully each word of the sentence, "tanta tempestas subito coorta est, ut nulla earum cursum tenere posset?

3. Decline *lenis ventus*, *fluctus* and *iter*. Write in full the tenses *complerentur* and *compulerint*.

4. Give the principal parts of the verbs *sustulerant*, *dejicerentur*, *conflixerunt*, *compulerint*, *amiserunt*, *ejecerunt*, *constitissent*, *perruperunt*, marking the quantity of the penultimate syllable of each word.

5. Write, with English meaning, the 1st Pers. Sing. of all the tenses, naming them, of the Indic. and Subj., Active Voice, of the verb *compello*. Give also the parts of the Infinitive Mood.

6. What is the Rule for forming the Comparative and Superlative of Adjectives? Give an example in an adjective of the 3rd declension, and add some examples of irregular comparison.

7. Give the derivation, with meaning of each component part, of the words, *subito*, *occasus*, *fluctus*, *provectus*, *iter*, *imprudens*, *impetus*, *perexiguus*.

8. Explain:—

(*a*) *post* diem quartum. Is *post* here an adverb or a preposition? Give reason for your answer.

(*b*) ut *nulla earum*.....Give the Rule for this construction.

(*c*) prope solis *occasum*. Account for this accusative.

(*d*) *adversa nocte* in altum provectæ. Why is the ablative used?

SESSIONAL EXAMINATIONS, 1887.

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SESSIONAL EXAMINATIONS 1887.

CLASSICS.

FIRST YEAR.

GREEK—PLUTARCH—GRACCHI.

TUESDAY, APRIL 5TH, 1887.—MORNING 9 to 12.

Examiner.....A. J. EATON M. A., PH. D.

1. Translate :—

(A) ἀρξαμένου δὲ πάλιν τοῦ Μουκίου τὰς φυλὰς ἀναγορεύειν, οὐδὲν ἐπεραίνετο τῶν εἰωθότων διὰ τὸν ἀπὸ τῶν ἐσχάτων θόρυβον, ὠθουμένων καὶ ὠθούντων τοὺς ἐναντίους εἰσβιαζομένους καὶ ἀναμιγνυμένους. ἐν δὲ τούτῳ Φούλβιος Φλάκκος ἀπὸ βουλῆς ἀνὴρ εἰς ἐμφανὲς καταστάς, ὡς οὐκ ἦν φθεγγόμενον ἐφικέσθαι, διεσήμηνε τῇ χειρὶ φράσαι τι βουλόμενον αὐτὸν ἰδίᾳ τῷ Τιβερίῳ. καὶ κελεύσαντος ἐκείνου διασχεῖν τὸ πλῆθος, ἀναβὰς μόλις καὶ προσελθὼν ἀπήγγειλεν ὅτι τῆς βουλῆς συγκαθεζομένης οἱ πλούσιοι τὸν ὑπατον μὴ πείθοντες αὐτοὶ διανοοῦνται καθ' αὑτοὺς ἀποκτιννύναι τὸν Τιβέριον, πολλοὺς ἐπὶ τοῦτο δούλους καὶ φίλους ὡπλισμένους ἔχοντες.

(B) μεγίστη δὲ τῷ Δρουσῳ πίστις εὐνοίας πρὸς τὸν δῆμον ἐγίνετο καὶ δικαιοσύνης τὸ μηδὲν αὑτῷ μηδ' ὑπὲρ ἑαυτοῦ φαίνεσθαι γράφοντα· καὶ γὰρ οἰκιστὰς ἑτέρους ἐξέπεμπε τῶν πόλεων καὶ διοικήσεσι χρημάτων οὐ προσῄει, τοῦ Γαΐου τὰ πλεῖστα καὶ μέγιστα τῶν τοιούτων αὐτῷ προστιθέντος. ἐπεὶ δὲ Ῥουβρίου τῶν συναρχόντων ἑνὸς οἰκίζεσθαι Καρχηδόνα γράψαντος ἀνηρημένην ὑπὸ Σκηπίωνος, κλήρῳ λαχὼν ὁ Γάϊος ἐξέπλευσεν εἰς Λιβύην ἐπὶ τὸν κατοικισμόν, ἔτι μᾶλλον ἐπιβὰς ὁ Δροῦσος ἀπόντος αὐτοῦ τὸν δῆμον ὑπελάμβανε καὶ προσήγετο, μάλιστα ταῖς κατὰ τοῦ Φουλβίου διαβολαῖς. ὁ δὲ Φούλβιος οὗτος ἦν τοῦ Γαΐου φίλος καὶ συνάρχων ἐπὶ τὴν διανομὴν τῆς χώρας ἠρημένος. ἦν δὲ θορυβώδης καὶ μισούμενος μὲν ὑπὸ τῆς βουλῆς ἀντικρυς, ὑποπτος δὲ καὶ τοῖς ἄλλοις ὡς τὰ συμμαχικὰ διακινῶν καὶ παροξύνων κρύφα τοὺς Ἰταλιώτας πρὸς ἀπόστασιν. οἷς ἀναποδείκτως καὶ ἀνελέγκτως λεγομένοις αὐτὸς προσετίθει πίστιν ὁ Φούλβιος, οὐχ ὑγιαινούσης οὐδὲ εἰρηνικῆς ὢν προαιρέσεως. τοῦτο μάλιστα κατέλυε τὸν Γάϊον ἀπολαύοντα τοῦ μίσους.

(C) κατατεθείσης δὲ τῆς κλίνης εἰς μέσον οἱ μὲν ἐσχετλίαζον ὡς ἐπὶ δεινῷ καὶ μεγάλῳ πάθει, τοῖς δὲ πολλοῖς ἐπῆει μισεῖν καὶ προβάλλεσθαι τοὺς ὀλιγαρχικούς, ὡς Τιβέριον μὲν Γράγχον ἐν Καπετωλίῳ φονεύσαντες αὐτοὶ δήμαρχον ὄντα καὶ τὸν νεκρὸν προσεξέβαλον, ὁ δ' ὑπηρέτης Ἀντύλλιος, οὐ δίκαια μὲν ἴσως πεπονθώς, τὴν δὲ πλείστην αἰτίαν εἰς τὸ παθεῖν (αὐτὸς) αὐτῷ παρασχών, ἐν ἀγορᾷ πρόκειται καὶ περιέστηκεν ἡ Ῥωμαίων βουλὴ θρηνοῦσα καὶ συνεκκομίζουσα μισθωτὸν ἄνθρωπον, ἐπὶ τῷ τὸν ἔτι λειπόμενον ἀνελεῖν τῶν τοῦ δήμου κηδομένων. ἐκ τούτου πάλιν εἰς τὸ βουλευτήριον ἀπελθόντες ἐψηφίσαντο καὶ προσέταξαν Ὀπιμίῳ τῷ ὑπάτῳ σώζειν τὴν πόλιν, ὅπως δύναιτο, καὶ καταλύειν τοὺς τυράννους.

2. (*a*) Define the terms 'Enclitics,' 'Proclitics.' Enumerate each class. (*b*) Name the Greek word according to its accent,—πάλιν, τοῦ, τούς, πλῆθος. (*c*) What is the general rule for the accentuation of the oblique cases? (*d*) Give, and explain, the accent of the gen. and dat. in the singular and plural of τιμή, λόγος, φλεψ, βασιλεύς. (*e*) Decline the following nouns accenting, with care: βουλή, ἀνήρ, χείρ, πλῆθος, πολύς, νοῦς (in the case of νοῦς, giving the uncontracted forms, side by side with the regular.)

3. Explain the construction of the following nouns:—(1) χειρί, (2) Δρουσῳ, (3) οἰκιστάς διοικήσεσι, (4) τῶν τοιούτων, (5) δήμον.

4. Give the principal parts, mood and tense of the following verbs: καταστάς, ἐφικέσθαι, διεσήμηνε, κελεύσαντες, ἀπήγγειλεν, ὑπελάμβανε, πεπονθώς, ἀφῃρητο, προήχθη.

5. (*a*) Remark upon the following constructions:—(1) Τὸ μηδνὶ αὐτῷ.....γράφοντα (2) εἰς τὸ παθεῖν (3) ἐκ τούτου (4) ὅπως δύναιτο (*b*) Can you account for the use of μή in the phrase οἱ πλούσιον τὸν ὕπατον μὴ πείθοντες?

(*c*) What is the force of ὡς in the two instances in which it occurs in Ext. C

6. (*a*) What is the the force of κατά in composition? of μετά? (*b*) What three different constructions does the verb ἀφαιρεῖν take in Plutarch? (*b*) Give the meaning and derivation of:—ἀναποδείκτως, περιπετής, ὀλιγαρχικός, ἀήθης (why not ἀν-?), πλῆθος (what corresponding form in Latin?), παρεγκτέρευον, δημαγωγός.

7. (*a*) Continue Plutarch's narrative of events which succeeded those related in extract (A). (*b*) What was the decree by which Opimius was given full power to crush C. Gracchus? What were the extraordinary powers conferred upon the consul at such a time? Where is there a statement of these given? Recite, if you can, the words of that author.

8. What classification of the participles may you make? Illustrate by citing two examples for each class from the above extracts.

9. (*a*) Compare the characters of the Gracchi. (*b*) Give a summary of the laws proposed by Caius Gracchus, his noble plans for Italy, his public works.

10. Write briefly upon the following topics:—

(*a*) Plutarch's life (*b*) The influence of his biographies (*c*) Credibility as a historian.

INTERMEDIATE EXAMINATION.

GREEK.—PLATO.—APOLOGY AND CRITO.

TUESDAY, APRIL 5TH, 1887;—MORNING 9 TO 12.

Examiners, ... { REV. GEORGE WEIR LL.D.
A. J. EATON PH. D.

1. Translate :—

(A) Τελευτῶν οὖν ἐπὶ τοὺς χειροτέχνας ἦα· ἐμαυτῷ γὰρ ξυνήδειν οὐδὲν ἐπισταμένῳ, ὡς ἔπος εἰπεῖν, τούτους δέ γ' ἤδειν ὅτι εὑρήσοιμι πολλὰ καὶ καλὰ ἐπισταμένους. καὶ τούτου μὲν οὐκ ἐψεύσθην, ἀλλ' ἠπίσταντο ἃ ἐγὼ οὐκ ἠπιστάμην καί μου ταύτῃ σοφώτεροι ἦσαν. ἀλλ', ὦ ἀνδρες: Ἀθηναῖοι, ταὐτόν μοι ἔδοξαν ἔχειν ἁμάρτημα, ὅπερ καὶ οἱ ποιηταί, καί οἱ ἀγαθοὶ δημιουργοί· διὰ τὸ τὴν τέχνην καλῶς ἐξεργάζεσθαι ἕκαστος ἠξίου καὶ τἆλλα τὰ μέγιστα σοφώτατος εἶναι, καὶ αὐτῶν αὕτη ἡ πλημμέλεια ἐκείνην τὴν σοφίαν ἀπέκρυπτεν· ὥστ' ἐμὲ ἐμαυτὸν ἀνερωτᾶν ὑπέρ τοῦ χρησμοῦ, πότερα δεξαίμην ἂν οὕτως ὥσπερ ἔχω ἔχειν, μήτε τι σοφὸς ὢν τὴν ἐκείνων σοφίαν, μήτε ἀμαθὴς τὴν ἀμαθίαν, ἢ ἀμφότερα ἃ ἐκεῖνοι ἔχουσιν ἔχειν. ἀπεκρινάμην οὖν ἐμαυτῷ καὶ τῷ χρησμῷ, ὅτι μοι λυσιτελοῖ ὥσπερ ἔχω ἔχειν.

(B) Ἴθι δὴ νῦν εἰπὲ τούτοις, τίς αὐτοὺς βελτίους ποιεῖ; δῆλον γὰρ, ὅτι οἶσθα, μέλον γέ σοι. τὸν μὲν γὰρ διαφθείροντα ἐξευρών, ὡς φῄς, ἐμὲ εἰσάγεις τουτοισὶ καὶ κατηγορεῖς· τὸν δὲ δὴ βελτίους ποιοῦντα ἴθι εἰπὲ καὶ μήνυσον αὐτοῖς, τίς ἐστιν. ὁρᾷς, ὦ Μέλητε, ὅτι σιγᾷς καὶ οὐκ ἔχεις εἰπεῖν; καίτοι οὐκ αἰσχρόν σοι δοκεῖ εἶναι καὶ ἱκανὸν τεκμήριον οὐ δὴ ἐγὼ λέγω, ὅτι σοι οὐδὲν μεμέληκεν; ἀλλ' εἰπέ, ὦ 'γαθέ, τίς αὐτοὺς ἀμείνους ποιεῖ; Οἱ νόμοι.

(C) εἰ δ' αὖ οἷον ἀποδημῆσαί ἐστιν ὁ θάνατος ἐνθένδε εἰς ἄλλον τόπον, καὶ ἀληθῆ ἐστι τὰ λεγόμενα, ὡς ἄρα ἐκεῖ εἰσὶν ἅπαντες οἱ τεθνεῶτες, τί μεῖζον ἀγαθὸν τούτου εἴη ἄν, ὦ ἄνδρες δικασταί; εἰ γὰρ τις ἀφικόμενος εἰς Ἅιδου, ἀπαλλαγεὶς τούτων τῶν φασκόντων δικαστῶν εἶναι, εὑρήσει τοὺς ὡς ἀληθῶς δικαστάς, οἵπερ καὶ λέγονται ἐκεῖ δικάζειν, Μίνως τε καὶ Ῥαδάμανθυς καὶ Αἰακὸς καὶ Τριπτόλεμος, καὶ ἄλλοι ὅσοι τῶν ἡμιθέων δίκαιοι ἐγένοντο ἐν τῷ ἑαυτῶν βίῳ, ἆρα φαύλη ἂν εἴη ἡ ἀποδημία.

(D) Σκόπει τοίνυν, ὦ Σώκρατες, φαίεν ἂν ἴσως οἱ νόμοι, εἰ ἡμεῖς ταῦτα ἀληθῆ λέγομεν, ὅτι οὐ δίκαια ἡμᾶς ἐπιχειρεῖς δρᾶν ἀν νῦν ἐπιχειρεῖς. ἡμεῖς γάρ σε γεννήσαντες, ἐκθρέψαντες, παιδεύσαντες, μεταδόντες ἁπάντων ὧν οἷοί τ' ἦμεν καλῶν σοὶ καὶ τοῖς ἄλλοις πᾶσι πολίταις, ὅμως προαγορεύομεν τί ἐξουσίαν πεποιηκέναι Ἀθηναίων τῷ βουλομένῳ, ἐπειδὰν δοκιμασθῇ καὶ ἴδῃ τὰ ἐν τῇ πόλει πράγματα καὶ ἡμᾶς τοὺς νόμους, ᾧ ἂν μὴ ἀρέσκωμεν ἡμεῖς, ἐξεῖναι λαβόντα τὰ αὑτοῦ ἀπιέναι ὅποι ἂν βούληται. καὶ οὐδεὶς ἡμῶν τῶν νόμων ἐμποδών ἐστιν οὐδ' ἀπαγορεύει, ἐάν τέ τις βούληται ὑμῶν εἰς ἀποικίαν ἰέναι, εἰ μὴ ἀρέσκοιμεν ἡμεῖς τε καὶ ἡ πόλις, ἐάν τε μετοικεῖν ἀλλοσέ ποι ἐλθών, ἰέναι ἐκεῖσε, ὅποι ἂν βούληται, ἔχοντα τὰ αὑτοῦ.

II. (*a*) Give the principal parts, and state fully where the following forms are found :—*ἦα, εἰρήσομαι, Ἴθι, μέλον, μήνυσον, τεθνεῶτες, σκοπεί, ἐκθρέψαντες, μεταδόντες, ἰδῃ.*

(*b*) Explain the case of the following words :—

(1) *ἐπισταμένῳ* (what other construction is found in the Apol. with *ξύνοιδα* ?), (2) *ἀμαθίαν*, (3) *Ἄιδου*, (4) *δικαστῶν*, (5) *Μίνως*, (6) *μελόν*, (7) *βελτίους* (also decline this word throughout), (8) *οὐ*, (9) *δικαία ἡμᾶς*, (10) *ὧν.....καλῶν.*

(*c*) (1) Name the parts, and classify the different conditional sentences in Greek.

(2) Translate, and say under what class of conditional sentences the following come :—

(*α*) *ἀλλ' ἐὰν μοὶ πείθησθε, φείσεσθέ μοι.* (*β*) *καὶ ἴσως ἂν διὰ ταῦτ, ἀπέθανον, εἰ μὴ ἡ ἀρχὴ διὰ ταχέων κατελύθη.* (*γ*) *εἰ οὖν με ἐπὶ τούτοις ἀφίοιτε, εἰποιμ' ἂν ὑμῖν.* (*δ*) *εἰ δὲ δαιμόνια νομίζω, καὶ δαιμόνας δήπου πολλὴ ἀνάγκη νομίζειν μέ ἐστιν.* (*ε*)*πολλὴ γὰρ ἂν εὐδαιμονία εἴη περὶ τοὺς νέους, εἰ εἷς μὲν μόνος αὐτοὺς διαφθείρει.* (*ζ*) *καὶ ἐπειδάν τις αὐτοὺς ἐρωτᾷ ὅ τι διδάσκων, ἔχουσιν οὐδὲν εἰπεῖν.* (*η*) *νῦν δὲ ὡς ἐοικεν, εἰ τριάκοντα μόναι μετέπεσον τῶν ψήφων, ἀποπεφεύγη ἄν.*

In the last example, carefully explain the form *ἀποπεφεύγη*.

(*d*) What are the chief uses of *μή* ?

Account for the use of *μή* and *οὐ* in the following sentences :

(1) *ἐοικά γ' οὖν τούτου γε σμικρῷ τινι αὐτῷ σοφώτερος εἶναι, ὅτι ἃ μὴ οἶδα οὐδὲ οἴομαι εἰδέναι.*

(2) *Πάντως δήπου, ἐάν τε σὺ καὶ Ἄνυτος οὐ φῆτε ἐάν τε φῆτε.*

(3) *ἀλλὰ μὴ οὐ τοῦτ' ἦ χαλεπόν, ὦ ἄνδρες, θάνατον ἐκφυγεῖν.*

(*e*) How are prohibitions, or negative commands, expressed in Greek ? What is the difference in meaning between these forms ? Illustrate by the verb *θορυβέω*.

III. (*a*) Explain the following law terms :—

(1) *διώκων, φεύγων.* (2) *δίκαι.* (3) *γραφαί.* (4) *διώκειν γραφήν, φεύγειν γραφήν.* (5) *ἐρήμην κατηγοροῦντες.* (6) *ἀνακρίσις.* (7) *ψῆφοι.* (8) *διωμοσία, ἀντωμοσία.* (9) *ἀγὼν τιμητός, ἀγὼν ἀτιμητός.*

(*b*) (1) How many Athenian citizens were entrusted with the power of deciding law suits ? How were they chosen, and what was their official name ? (2) State the ordinary course of procedure till the opening of the case in court. (3) In what sense were advocates (*συνήγοροι*) allowed ? (4) What were the ordinary penalties for crimes against the state ? Who were appointed to oversee the penalty of death ? How were these persons chosen and what were their other duties ?

IV. Write out a brief analysis of the Apology and Crito.

THIRD YEAR.

GREEK—AESCHYLUS.—PROMETHEUS VINCTUS.

Examiner,.....Rev. George Cornish, LL.D.

1. Translate:—

(A) ΚΡ. σὺ δ' αὖ κατοκνεῖς τῶν Διός τ' ἐχθρῶν ὕπερ
στένειν; ὅπως μὴ σαυτὸν οἰκτιεῖς ποτέ.
ΗΦ. ὁρᾷς θέαμα δυσθέατον ὄμμασιν.
ΚΡ. ὁρῶ κυροῦντα τόνδε τῶν ἐπαξίων.
ἀλλ' ἀμφὶ πλευραῖς μασχαλιστῆρας βάλε.
ΗΦ. δρᾶν ταῦτ' ἀνάγκη, μηδὲν ἐγκελεύ' ἄγαν.
ΚΡ. ἦ μὴν κελεύσω κἀπιθωύξω γε πρός.
χώρει κάτω, σκέλη δὲ κίρκωσον βίᾳ.
ΗΦ. καὶ δὴ πέπρακται τοὔργον οὐ μακρῷ πόνῳ.
ΚΡ. ἐρρωμένως νῦν θεῖνε διατόρους πέδας.
ὡς οὐπιτιμητής γε τῶν ἔργων βαρύς.
ΗΦ. ὁμοια μορφῇ γλῶσσά σου γηρύεται.
ΚΡ. σὺ μαλθακίζου, τὴν δ' ἐμὴν αὐθαδίαν
ὀργῆς τε τραχύτητα μὴ 'πίπλησσέ μοι.
ΗΦ. στείχωμεν, ὡς κώλοισιν ἀφιβληστρ' ἔχει.

(B) ἀλλ', ὦ ταλαίπωρ', ἃς ἔχεις ὀργὰς ἄφες,
ζήτει δὲ τῶνδε πημάτων ἀπαλλαγάς.
ἀρχαῖ' ἴσως σοι φαίνομαι λέγειν τάδε·
τοιαῦτα μέντοι τῆς ἀγαν ὑψηγόρου
γλώσσης Προμηθεῦ, τἀπίχειρα γίγνεται.
σὺ δ' οὐδέπω ταπεινὸς οὐδ' εἴκεις κακοῖς,
πρὸς τοῖς παροῦσι δ' ἄλλα προσλαβεῖν θέλεις.
οὔκουν ἐμοιγε χρώμενος διδασκάλῳ
πρὸς κέντρα κῶλον ἐκτενεῖς, ὁρῶν ὅτι
τραχὺς μόναρχος οὐδ' ὑπεύθυνος κρατεῖ.
καὶ νῦν ἐγὼ μὲν εἶμι καὶ πειράσομαι
ἐὰν δύνωμαι τῶνδέ σ' ἐκλῦσαι πόνων·
σὺ δ' ἡσύχαζε μηδ' ἄγαν λαβροστόμει.
ἦ οὐκ οἶσθ' ἀκριβῶς ὢν περισσόφρων ὅτι
γλώσσῃ ματαίᾳ ζημία προστρίβεται;

(C) χρίει τις αὖ με τὰν τάλαιναν οἶστρος,
εἴδωλον Ἄργου γηγενοῦς, ἄλευ δᾶ,
τὸν μυριωπὸν εἰσορῶσα βούταν.
ὁ δὲ πορεύεται δόλιον ὄμμ' ἔχων,
ὃν οὐδὲ κατθανόντα γαῖα κεύθει.
ἀλλ' ἐμὲ τὰν τάλαιναν

ἐξ ἑνέρων περῶν κυναγετεῖ,
πλανᾷ τε νῆστιν ἀνὰ τὰν παραλίαν ψάμμον.
ὑπὸ δὲ κηρόπλαστος ὀτοβεῖ ὀδὸναξ
ἀχέτας ὑπνοδόταν νόμον· ἰὼ, ἰὼ πόποι,
ποῖ, πόποι, ποῖ μ' ἄγουσι τηλέπλανοι πλάναι.

(2.) (*a*) Ext. (A).—(1) Explain the usage in ὅπως μὴ οἰκτιεῖς. (2) τῶν ἐπαξίων :—On what does the Gen. depend, and why? (3) ἦ μήν, γέ, καὶ δή, ὡς νῦν :—Give the exact import of these particles. (*b*) Ext. (C) —(1) Scan the vs. ἦ οὐκ * * * ὅτι. (2) οὐκουν—οὐκοῦν :—Distinguish (3) ἦ οὐκ οἶσθ' :—express in Latin. (*c*) Ext. (C)—(1) Narrate briefly the legend of Io, and show why this episode is here introduced. (2) How was the person of Io represented on the stage? (3) δᾶ, πόποι :—Explain these words. (3) (*a*) Explain the forms σφέ, νίν μίν, σφῶν. (*b*) (1) εἰ, γάρ, * * ἦκεν. (2) ὡς, μήτε * * * ἐπεγήθει. (3) τοῦτ' οὐκετ' ἂν πύθοιο. (4) ἔπαυσα μὴ προδέρκεσθαι μόρον :—Explain these usages severally. (*c*) Give the name and scheme of the metre of Ext. (A) and scan the first four vss.

4. Show the composition and give the meaning of the following words :—παράκοπον, οἰστρηλάτῳ, κηρόπλαστος, κυναγεταῖ, διαμφίδιον, ὀλιγοδρανίαν, ἐπάργεμα, εὐωνύμους, δεξιοί, συμβόλους, κατεσκέλλοντο, θαλασσόπλαγτα.

5. (*a*) Define *Tmesis*, and point out an instance in any of the Extt. given for translation. (*b*) Define *Elision*, and complete the forms βούλεν', τιν', ἡδοι', αὐλῶν'. (*c*) Define *Crasis*, and resolve the following :—χἠ, χὠσα, κεἰς, μἤκιμι, οὐκ, οὐμοί. Distinguish between the use of the Participle with the Article and without it.

(6) Parse the following verbs, giving the principal parts :—προκήδου, ἀλύξω, προσέπτα, παρεξίασι, ἀγαγες, ἐκτακείη, ποτνισσομένα, ἀπαλλαγῶ, ἦσαν, λέλακε, πημανθῇ, ἀφῖξαι.

7. (*a*) Write down the Attic for the following :—τύχας, οὐλομένας, τάν, τᾶν, παγαῖς, τᾶς, ἀχω, προσέβα, πωλεύμεναι. (*b*) Explain the forms and name the dialect of οἰκτιεῖς, βᾶσαι, πελῶ, ἦσαν.

8. (*a*) Name the *Dramatis Personae* of this play, and the other dramas of Aeschylus in which he used the legend of Prometheus. (*b*) How many actors were allowed on the stage at the same time? (*c*) Give the approximate date of this Drama and name eminent contemporaries of Aeschylus in politics and literature.

B. A. ORDINARY EXAMINATION, 1887.

MONDAY, APRIL 18th:—MORNING 9 to 12.

GREEK.— | THUCYDIDES, BOOK VI.
AESCHYLUS, PROMETHEUS VINCTUS,

Examiners..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, LL. D.

1. Translate:—

(A) Ἐπειδὴ, πάντως ὁρῶ ὑμᾶς, ὦ Ἀθηναῖοι, ὡρμημένους στρατεύειν, ξυνενέγκοι μὲν ταῦτα ὡς βουλόμεθα, ἐπὶ δὲ τῷ παρόντι ἃ γιγνώσκω σημανῶ. ἐπὶ γὰρ πόλεις, ὡς ἐγὼ ἀκοῇ αἰσθάνομαι, μέλλομεν ἰέναι μεγάλας καὶ οὔθ' ὑπηκόους ἀλλήλων οὔτε δεομένας μεταβολῆς, ἢ ἂν ἐκ βιαίου τις δουλειας ἀσμενος ἐς ῥᾴω μετάστασιν χωροίη, οὐδ' ἂν τὴν ἀρχὴν τὴν ἡμετέραν εἰκότως ἀντ' ἐλευθερίας προσδεξαμένας, τό τε πλῆθος, ὡς ἐν μιᾷ νήσῳ, πολλὰς τὰς Ἑλληνίδας: πλὴν γὰρ Νάξου καὶ Κατάνης, ἃς ἐλπίζω ἡμῖν κατὰ τὸ Λεοντίνων ξυγγενες, προσέδεσθαι, ἄλλαι εἰσὶν ἑπτά, καὶ παρεσκευασμέναι τοῖς πᾶσιν ὁμοιοτρόπως μάλιστα τῇ ἡμετέρᾳ δυνάμει, καὶ οὐχ ἥκιστα ἐπὶ ἃς μᾶλλον πλέομεν, Σελινοῦς καὶ Συράκουσαι.

(B) Τοὺς μὲν Ἀθηναίους ὅστις μὴ βούλεται οὕτω κακῶς φρονῆσαι καὶ ὑποχειρίους ἡμῖν γενέσθαι ἐνθάδε ἐλθόντας, ἢ δειλός ἐστιν ἢ τῇ πόλει οὐκ εὐνους· τοὺς δ' ἀγγέλλοντας τὰ τοιαῦτα καὶ περιφόβους ὑμᾶς ποιοῦντας τῆς μὲν τόλμης οὐ θαυμάζω, δῆς δὲ ἀξυνεσίας, εἰ μὴ οἴονται, ἐνδηλοι εἶναι. οἱ γὰρ δεδιότες ἰδίᾳ τι βούλωνται τὴν πόλιν ἐς ἐκπληξιν καθιστάναι, ὅπως τῷ κοινῷ φόβῳ τὸ σφέτερον ἐπηλυγάζωνται. καὶ νῦν αὗται αἱ ἀγγελίαι τοῦτο δύνανται· οὐκ ἀπὸ ταὐτομάτου, ἐκ δὲ ἀνδρῶν, οἵπερ ἀεὶ τάδε κινοῦσι, ξύγκεινται ὑμεις δὲ ἢν εὐ βουλεύησθε, οὐκ ἐξ ὧν οὗτοι αγγέλλουσι σκοποῦντες λογιεῖσθε τὰ οἰκότα, ἀλλ' ἐξ ὧν ἂν ἀνθρωποι δεινοὶ καὶ πολλῶν ἔμπειροι, ὥσπερ ἐγὼ Ἀθηναίους ἀξιῶ, δράσειαν.

(C) αἰφνίδιοι δὲ ἢν προσπέσωσιν, ἐως ἔτι περιδεεῖς προσδέχονται, μάλιστ' ἂν σφᾶς περιγενέσθαι καὶ κατὰ πάντα ἂν αὐτοὺς ἐφυβῆσαι, τῇ τε ὄψει (πλεῖστοι γὰρ ἂν νῦν φανῆναι) καὶ τῃ προσδοκίᾳ ὧν πείσονται, μάλιστα δ' ἂν τῷ αὐτίκα κινδύνῳ τῆς μάχης. εἰκὸς δὲ εἶναι καὶ ἐν ταῖς ἀγροῖς πολλοὺς ἀποληφθῆναι ἔξω διὰ τὸ ἀπιστεῖν σφᾶς μὴ ἥξειν, καὶ ἐσκομιζομένων αὐτῶν τὴν στρατιὰν οὐκ ἀπορήσειν χιημάτων, ἣν πρὸς τῇ πόλει κρατοῦσα καθέζηται· τούς τε ἄλλους Σικελιώτας οὕτως ἤδη μᾶλλον καὶ ἐκείνοις οὐ ξυμμαχήσειν καὶ σφίσι προσιέναι καὶ οὐ διαμελλήσειν περισκοποῦντας ὁπότεροι κρατῆσουσι. ναύσταθμον δὲ ἐπαναχωρήσαντας καὶ ἐφορμηθέντας Μέγαρα ἔφη χρῆναι ποιεῖσθαι, ἃ ἦν ἐρῆμα, ἀπέχοντα Συρακουσῶν οὔτε πλοῦν πολὺν οὔτε ὁδόν·

(2). In ext. (C)—(*a*) the following variants occur: μάλιστ' ἂν σφεῖς ἀπολεῖφθηναι. καὶ ἐφόρμησιν τὰ Μέγαρα. Distinguish between them. (*b*) πλοῦν—ὁδόν:— Why the Accusative? (*c*) διὰ τὸ ἀπιστεῖν σφᾶς μὴ ἥξειν:—Explain the construction.

3. Parse the following words in above Extracts:—(1) *ξυνενέγκοι*. (2) *σημανῶ*. (3) *μεταβολῆς*. (4) *ῥᾴφ*. (5) *ὁμοιοτρόπως*. (6) *ἀξυνεσίας*. (7) *δεδιότες*. (8) *ἐπηλυγαζωνται*. (9) *λογιεῖσθε*. (10) *δράσειαν*. (11) *ἐλασσω*.

4. Translate carefully the following extt. adding an explanatory note, grammatical or general, where you see meet:—(*a*) *τάχα δ' ἂν ἴσως, εἰ δίχα ἡμῶν τὴν δύναμιν λάβοιεν, ὅπερ νῦν σπεῦδομεν, καὶ πάνυ ἂν ξυνεπιθοῖντο μετὰ Σικελιωτων, οὓς πρὸ πολλῶν ἂν ἐτιμήσαντο ξυμμάχους γενέσθαι ἐν τῷ πρὶν χρόνῳ.* (*b*) *ὧν γὰρ ἐν ἀξιώματι ὑπὸ τῶν ἀστῶν, ταὶς ἐπιθυμίαις μείζοσιν ἢ κατὰ τὴν ὑπάρχουσαν οὐσίαν ἐχρῆτο ἐς τε τὰς ἱπποτροφίας καὶ τὰς ἄλλας δαπάνας· ὅπερ καὶ καθεῖλεν ὕστερον τὴν τῶν Ἀθηναίων πόλιν οὐχ ἥκιστα* (*c*) *αἱ ὁ στόλος οὐχ ἧσσον τόλμης τε θάμβει καὶ ὄψεως λαμπρότητι περιβόητος ἐγένετο ἢ στρατιᾶς πρὸς οὓς ἐπῆσαν ὑπερβολῇ, καὶ ὅτι μέγιστος ἤδη διάπλους ἀπὸ τῆς οἰκείας καὶ ἐπὶ μεγίστῃ ἐλπιδι τῶν μελλόντων πρὸς τὰ ὑπάρχοντα ἐπεχειρήθη.* (*d*) *καὶ τῷ μὲν Νικίᾳ προσδεχομένῳ ἦν τὰ ἑτέροιν καὶ ἀλογώτερα.*

5. Write explanatory notes on:—(1) *ἐπικηρυκεύεσθαι*. (2) *οἱ θῆτες ἐπιβάται*. (3) *θρανῖται, ζευγῖται, θαλαμῖται*. (4) *ὦ πρύτανι ἐπιψήφιζε καὶ γνώμας προτίθει*. (5) *Ἰταλοι—Ἰταλιῶται*.

6. Translate, giving the names of the speakers where omitted:—

(D) *τίς οὖν ἀνάγκης ἐστὶν οἰακοστρόφος;*
Μοῖραι τρίμορφοι μνήμονές τ' Ἐρινύες.
τούτων ἄρα Ζεύς ἐστιν ἀσθενέστερος.
οὔκουν ἂν ἐκφύγοι γε τὴν πεπρωμένην.
τί γὰρ πέπρωται Ζηνὶ πλὴν ἀεὶ κρατεῖν;
τοῦτ' οὐκ ἔτ' ἂν πύθοιο μηδὲ λιπάρει.
ἢ πού τι σεμνόν ἐστιν ὃ ξυναμπέχεις.
ἄλλου λόγου μέμνησθε, τόνδε δ' οὐδαμῶς
καιρὸς γεγωνεῖν, ἀλλὰ συγκαλυπτέος
ὅσον μάλιστα· τόνδε γὰρ σώζων ἐγὼ
δεσμοὺς ἀεικεῖς καὶ δύας ἐκφυγγάνω.

(E) *μηδάμ' ὁ πάντα νέμων*
θεῖτ' ἐμᾷ γνώμᾳ κράτος ἀντίπαλον Ζεὺς,
μηδ' ἐλινύσαιμι θεοὺς ὁσίαις θοίναις ποτινισσομένα
βουφόνοις, παρ' Ὠκεανοῦ πατρὸς ἀσβεστον πόρον,
ἀλλά μοι τόδ' ἐμμένοι
καὶ μήποτ' ἐκτακείη.

(F) *τοιοῖδε μόχθου τέρμα μή τι προσδόκα,*
πρὶν ἂν θεῶν τις διάδοχος τῶν σῶν πόνων
φανῇ, θελήσῃ τ' εἰς ἀναύγητον μολεῖν
Ἄιδην κνεφαιά τ' ἀμφὶ Ταρτάρου βάθη.

πρὸς ταῦτα βούλευ'· ὡς δ' οὐ πέπλασμένος
ὁ κόμπος, ἀλλὰ καὶ λίαν εἰρημένος·
ψευδηγορεῖν γὰρ οἶκ ἐπίσταται στόμα
τὸ Δῖον, ἀλλὰ πᾶν ἔπος τελεῖ. σὺ δὲ
πάπταινε καὶ φρόντιζε, μηδ' αὐθαδίαν
εὐβουλίας ἀμείνον' ἡγήσῃ ποτέ.

7. (*a*) Ext. (D)—(1) Μοῖραι—Ἐρινυες :—Give their names. (2) οὐκέτ' ἂν πύθοιο :—explain this usage. (3) What is the subject-matter of the Ode here begun ? with what object is it here introduced ? (4) Parse and derive the following words :—*πύθοιο, ξυναμπέχειν, ἀσβεστον, ἐκτακείη, ἀκικυν, παρεξίασι, προσέπτα, ἰότατι.*

8. (*a*) Comment on the use of τὲ—καί, καὶ—καί, and τὲ—τέ. (*b*) Give the force of the following particles, or combinations :—εἰ καί, καὶ εἰ, ἀλλ' ἔτι, καὶ νῦν, ἠπού γε δή, καὶ μήν, καὶ δὴ καὶ. (*c*) Illustrate the use of ὡς as a subjective particle. (*d*) Translate οἱ μὲν—οἱ δὲ into Latin, showing the correct usage.

9. State in regard to the Prometheus Vinctus :—(1) the probable date of its first appearance ;—(2) the names of the plays of which it formed one ; (3) τὰ τοῦ Δράματος Πρόσωπα.

FIRST YEAR.

Latin.—Sallust.

WEDNESDAY, APRIL 5TH, 1887:—MORNING, 9 TO 12.

Examiner,.....A. J. EATON, M.A., PH.D.

I.

(A) Quæ homines arant, navigant, ædificant, virtuti omnia parent. Sed multi mortales, dediti ventri atque somno, indocti incultique vitam sicuti peregrinantes transiere : quibus profecto contra naturam corpus voluptati anima oneri fuit. Eorum ego vitam mortemque iuxta æstumo, quoniam de utraque siletur. Verum enimvero is demum mihi vivere atque frui anima videtur, qui aliquo negotio intentus præclari facinoris aut artis bonæ famam quærit. Sed in magna copia rerum aliud alii natura iter ostendit.

(B) Postquam accepere ea homines, quibus mala abunde omnia erant, sed neque res neque spes bona ulla, tametsi illis quieta movere magna merces videbatur, tamen postulavere plerique, ut proponeret, quæ conditio belli foret, quæ præmia armis peterent, quid ubique opis aut spei haberent. Tum Catilina polliceri tabulas novas, proscriptionem locupletium, magistratus, sacerdotia, rapinas, alia omnia quæ bellum atque lubido victorum

fert. Præterea esse in Hispania citeriore Pisonem, in Mauretania cum exercitu P. Sittium Nucerinum, consili sui participes: *petere consulatum G. Antonium, quem sibi conlegam fore speraret*, hominem et familiarem et omnibus necessitudinibus circumventum: cum eo se consulem initium agundi facturum.

(C) Ea cum Ciceroni nuntiarentur, ancipiti malo permotus, quod neque urbem ab insidiis privato consilio longius tueri poterat, neque exercitus Manli quantus aut quo consilio foret satis compertum habebat, rem ad senatum refert, iam antea volgi rumoribus exagitatum. Itaque, quod plerumque in atroci negotio solet, senatus decrevit, *darent operam consules ne quid res publica detrimenti caperet.* Ea potestas per senatum more Romano magistratui maxuma permittitur, exercitum parare, bellum gerere, coercere omnibus modis socios atque civis, domi militiæque imperium atque iudicium summum habere: aliter sine populi iussu nullius earum rerum consuli ius est. Post paucos dies L. Sænius senator in senatu litteras recitavit quas Fæsulis adlatas sibi dicebat, in quibus scriptum erat, G. Manlium arma cepisse cum magna multitudine ante diem VI. Kalendas Novembris. Simul, id quod in tali re solet, alii portenta atque prodigia nuntiabant, alii conventus fieri, arma portari, Capuæ atque in Apulia servile bellum moveri.

II.

(*a*) Explain clearly the case of the following nouns:—*quæ, virtuti, ali quo negotio, opis, quem, domi militiæque, nullius earum rerum, Fæsulis, Capuæ.*

(*b*) State fully the principles of syntax for the mood and tense: *proponeret, foret, speraret, darent, caperet.*

(*c*) What changes take place from direct to indirect narration? To illustrate some of these principles, change the passages in italics to direct narration.

(*d*) What is meant by the Historical Infinitive? Is it comparatively frequent in Sallust? If there are any instances of it in the above extracts, point them out.

(*e*) *quieta movere;* construction of the infinitive here. In what two instances only can it be thus used?

(*f*) Does the Latin Infinitive ever denote purpose? In what ways may the English final infinitive be expressed in Latin?

III.

(1) Give the derivation of *virtus, aspere, prospere, parricida, peregrinantes.*

(2) Comment upon the following expressions:

tabulae novae; proscriptio; novus homo; domi militiæque; coloniis et municipiis; reus pecuniarum repetundarum; patria potestas.

(3) Distinguish between the meanings of *potestas, potentia, imperium, regnum; facinus, scelus, flagitium.*

(4) Mention peculiarities of spelling in the above extracts, and remark especially upon such forms as *transiere* and *civis* (acc. pl.).

(5) Enumerate some of the peculiarities of Sallust's style.

IV.

Translate into Latin:

(1) My objects are different from yours, nor are my hopes the same as yours.

(2) The charge of the enemy was so sudden that no one could find his arms or proper rank.

(3) I blush at having persuaded you to abandon this noble undertaking.

(4) We perceived well enough that danger was at hand; of its source, nature, character and extent, we were ignorant.

(5) I was the first to venture on these enterprises, I will be the last to relinquish them.

(6) What was I to do? said he, what to say? Who would care to blame me, because I refused to listen to such abandoned men?

V.

Translate (at sight):—

Marius ad Zamam pervenit. Id oppidum, in campo situm, magis opere quam natura munitum erat, nullius idoneæ rei egens, armis virisque opulentum. Igitur Metellus pro tempore atque loco paratis rebus cuncta moenia exercitu circumvenit, legatis imperat ubi quisque curaret. Deinde signo dato undique simul clamor ingens oritur, neque ea res Numidas terret: infensi intentique sine tumultu manent: proelium incipitur. Romani, pro ingenio quisque, pars eminus glande aut lapidibus pugnare, alii succedere ac murum modo subfodere modo scalis adgredi, cupere proelium in manibus facere. Contra ea oppidani in proxumos saxa volvere, sudis, pila, praeterea picem sulfure et taeda mixtam ardenti mittere.

INTERMEDIATE EXAMINATION.

LATIN.—HORACE.—EPISTLES, BOOK I.

WEDNESDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiners, ... { REV. GEORGE WEIR, LL.D.
A. J. EATON, PH. D.

1. Translate:—

(A) "O cives, cives, quærenda pecunia primum est;
virtus post nummos;" hæc Janus summus ab imo

prodocet, hæc recinunt juvenes dictata senesque.
Est animus tibi, sunt mores, est lingua fidesque,
sed quadringentis sex septem milia desunt:
plebs eris. At pueri ludentes "rex eris" aiunt,
"si recte facies." Hic murus æneus esto,
nil conscire sibi, nulla pallescere culpa.

(B) Nestor componere litis
inter Peliden festinat et inter Atriden:
hunc amor, ira quidem communiter urit utrumque.
Quicquid delirant reges, plectuntur Achivi.
Seditione, dolis, scelere atque libidine et ira
Iliacos intra muros peccatur et extra.

(C) An male sarta
gratia nequiquam coit et rescinditur, ac vos
seu calidus sanguis seu rerum inscitia vexat
indomita cervice feros? Ubicumque locorum
vivitis, indigni fraternum rumpere fœdus,
pascitur in vestrum reditum votiva juvenca.

(D) Si fortunatum species et gratia præstat,
mercemur servum qui dictet nomina, lævum
qui fodicet latus et cogat trans pondera dextram
porrigere: "hic multum in Fabia valet, ille Velina;
cui libet hic fascis dabit eripietque curule
cui volet inportunus ebur." Frater, pater adde;
ut cuique est ætas, ita quemque facetus adopta.
Si bene qui cenat bene vivit, lucet, eamus
quo ducit gula, piscemur, venemur, ut olim
Gargilius, qui mane plagas, venabula, servos,
differtum transire forum populumque jubebat,
unus ut e multis populo spectante referret
emptum mulus aprum.

(E) Nec somnum plebis laudo satur altilium, nec
otia divitiis Arabum liberrima muto.
Sæpe verecundum laudasti, rexque paterque
audisti coram, nec verbo parcius absens:
inspice si possum donata reponere lætus.

(F) Lætus sorte tua vives sapienter, Aristi,
nec dimittes incastigatum, ubi pura
cogere quam satis est ac non cessare videbor.
Imperat aut servit collecta pecunia cuique,
tortum digna sequi potius quam ducere funem.
Haec tibi dictabam post fanum putre Vacunæ,
excepto quod non simul esses, cetera lætus.

2. Parse fully, giving at the same time the rules of construction: (1) quicquid, (2) delirant, (3) plectuntur (giving the two forms, meanings and derivations of plecto), (4) rumpere (giving the prose construction), (5) pascitur (6) altilium (also derivation), (7) audisti (what is its peculiar meaning and construction here?), (8) incastigatum, 9) excepto, (10) cetera.

3. (*a*) Account for the construction of (1) locorum, (2) indomita cerviice, (3) dictet, (4) frater, pater; (*b*) cui libet: what change in the sense would cuilibet give? (*c*) differtum forum populumque; what rhetorical figure hire? (*d*) Is the infinitive construction with jubebat the regular one? (*e*) Explain the case of verbo. (*f*) Distinguish the uses of rure and ruri. How are they used by Horace?

4. Comment upon the following expressions:

(*a*) Janus summus ab imo. (*b*) si recte facies. (*c*) servum qui dictet nomina. (*d*) trans pondera. (*e*) Cærite cera. (*f*) dicenda tacenda. (*g*) Strenua nos exercet inertia. (*h*) non cuivis homini contingit adire Corinthum. (*i*) alter rixatur de lana sæpe caprina. (*k*) dente Theonino.

5. Translate:

(*a*) Fingit equum tenera docilem cervice magister
ire *viam* qua monstret eques.

(*b*) Quid censes munera terræ
quid *maris* extremos Arabas ditantis et Indos
ludicra quid *plausus* et amici dona Quirites?

(*c*) aptat ephippia bos *piger* optat arare caballus.

Give also the construction of the words in italics, stating clearly your reasons. What possible translations of (*b*)?

6. Notice peculiarities of metre in the following lines:

(*a*) Invidus alterius macrescit rebus opimis.

(*b*) Di tibi divitias dederunt artemque fruendi.

(*c*) Vade, vale; cave ne titubes mandataque frangas.

7. (*a*) State and illustrate by examples the rules for the sequence of tenses. (*b*) How is the imperative of direct narration rendered in indirect? (*c*) Give construction with quin, quominus and quum. (*e*) Give the chief instances in which the relative qui is followed by the subjunctive. (*f*) How are negative purpose and result expressed?

8. Give the derivation and exact meaning of the following:—sollemnia, delirant, conpesce, importunus, eliminet, suspice, requies, cohors, momenta, apricum, repulsam, antiquus.

9. State briefly the subjects of the First Book of Horace's Epistles, and the merits of this book.

THIRD YEAR.

LATIN.—LIVY, BOOK XXI., CAP. 1-20.

WEDNESDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner, ... REV. DR. CORNISH.

1. Translate:—

(A) Numquam ingenium idem ad res diversissimas, parendum atque imperandum, habilius fuit. itaque haud facile discerneres, utrum imperatori an exercitui carior esset: neque Hasdrubal alium quemquam praeficere malle, ubi quid fortiter ac strenue agendum esset, neque milites alio duce plus confidere aut audere. plurimum audaciae ad pericula capessenda, plurimum consilii inter ipsa pericula erat. nullo labore aut corpus fatigari aut animus vinci poterat. caloris ac frigoris patientia par; cibi potionisque desiderio naturali, non voluptate modus finitus; vigiliarum somnique nec die nec nocte discriminata tempora; id, quod gerendis rebus superesset, quieti datum; ea neque molli strato neque silentio accersita; multi saepe militari sagulo opertum humi iacentem inter custodias stationesque militum conspexerunt.

(B) Quae cum admota catapultis ballistisque per omnia tabulata dispositis muros defensoribus nudasset, tum Hannibal occasionem ratus quingentos ferme Afros cum dolabris ad subruendum ab imo murum mittit. nec erat difficile opus, quod caementa non calce durata erant, sed interlita luto structurae antiquae genere. itaque latius, quam qua caederetur, ruebat, perque patentia ruinis agmina armatorum in urbem vadebant. locum quoque editum capiunt, conlatisque eo catapultis ballistisque, ut castellum in ipsa urbe velut arcem inminentem haberent, muro circumdant. et Saguntini murum interiorem ab nondum capta parte urbis ducunt. utrimque summ[illegible]vi et muniunt et pugnant; sed interiora tuendo minorem in dies urbem Saguntini faciunt. simul crescit inopia omnium longa obsidione et minuitur expectatio externae opis, cum tam procul Romani, unica spes, circa omnia hostium essent.

(C) In iis nova terribilisque species visa est, quod armati—ita mos gentis erat—in concilium venerunt. cum verbis extollentes gloriam virtutemque populi Romani ac magnitudinem imperii petissent, ne Poeno bellum Italiae inferenti per agros urbesque suas transitum darent, tantus cum fremitu risus dicitur ortus, ut vix a magistratibus maioribusque natu iuventus sedaretur: adeo stolida inpudensque postulatio visa est, censere, ne in Italiam transmittant Galli bellum, ipsos id advertere in se agrosque suos pro alienis populandos obicere. sedato tandem fremitu responsum legatis est neque Romanorum in se meritum esse neque Carthaginiensium injuriam, ob quae aut pro Romanis aut adversus Poenos sumant arma. contra ea audire sese gentis suae homines agro finibusque Italiae pelli a populo Romano stipendiumque pendere et cetera indigna pati.

2. (*a*) Ext. (A).—(1) Haud facile *discerneres* :—Explain this idiom and also the use of the *Infinitive* in the following clauses. (2) *Gerendis, rebus* :—Show the construction. (3) *Humi* :—What case? (*b*) Ext. (B).—(1) *Omnia tabulata* :—Explain. (2) *Caederetur* :—Why the Subjunctive? (3) *Locum* * * * *muro circumdant* :—Give the alternative construction. (4) *Perque patentia ruinis* :—Supply the ellipsis and construe. (*c*) Ext. (C).—(1) *In iis* :—To what does the Pronoun refer and why? (2) *Censere* :—What subject? (3) *Gentis suae homines* :—Who and where were they?

3. Write short explanatory notes on :—(1) Praerogativam militarem. (2) Anceps Mars. (3) Custodias stationesque. (4) Agmine quadrato. (5) De republica retulissent. (6) Vineae, catapultae, ballistae. (7) Pro contione. (8) Cum Gallis tumultuatum. (9) Latum ad populum. (10) Senatus Alorco datus est.

4. Translate and write explanatory *grammatical* notes on :—(1) Sagunto capta—capto. (2) Quia taedebat imperii Punici. (3) Etsi priore foedere staretur, satis cantum erat Saguntinis sociis utrorumque exceptis. (4) Cui enim parci potuit? (5) Handquaquam prospere postquam ad effectum operis ventum est coeptis succedebat. (6) Ut superante laetitia dolores ridentis etiam speciem praebuerit.

5. Parse the following verbs, giving the principal parts of each :—Cantum erat, prodideritis, icta, excitos, ratus, collatis, dispositis, passi sitis, ulti, fusum, haesisset, conserto.

6. Give themeaning and derivation of :—Mobilis, stipendium, provincia, praeda, infesto, concio, celebre, caementa, celoces, sagulo.

7. Turn the following into *Orat. Obliq.*—" Hic vobis bellum et pacem portamus; utrum placet sumite." And the following into *Orat. recta* :—"Daret utrum vellet; et cum is * * * bellum dare dixisset; accipere se * * et quibus acciperent animis, iisdem se gesturos.'

8. Define the geographical position, giving modern names whenyou can, of :—Zacynthus, Saguntum, Carthago, Carthago nova, Aegates, Ticinus, Sardos Corsosque et Istros.

9. Turn into Latin :—

The death of Attila was followed by the murder of Aetius. Valentinian from the instinct of a base and jealous mind, hated the man who was universally celebrated as the terror of the barbarians and the support of the republic. The fame of Aetius, his wealth and dignity, the numerous and martial train of barbarian attendants, and the hopes of his son Gaudentius, who was contracted in marriage to the emperor's daughter Eudoxia, had already raised him above the rank of a subject.

B. A. ORDINARY EXAMINATION, 1887.

WEDNESDAY, APRIL 6TH :—MORNING, 9 TO 12.

LATIN { TACITUS.—ANNALS, BOOK II.
PLAUTUS.—AULULARIA.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, LL.D.

1. Translate :—

(A) Auctus omine, addicentibus auspiciis, vocat contionem et quæ sapientia provisa aptaque inminenti pugnæ disserit. Non campos modo militi Romano ad proelium bonos, sed si ratio adsit, silvas et saltus ; nec enim inmensa barbarorum scuta, enormis hastas inter truncos arborum et enata humo virgulta perinde haberi quam pila et gladios et hærentia corpori tegmina, denserent ictus, ora mucronibus quærerent : non loricam Germano, non galeam, ne scuta quidem ferro nervove firmata, sed viminum textus vel tenuis et fucatas colore tabulas ; primam utcumque aciem hastatam, ceteris præusta aut brevia tela, iam corpus ut visu torvum et ad brevem impetum validum, sic nulla vulnerum patientia : sine pudore flagitii sine cura ducum abire, fugere, pavidos adversis, inter secunda non divini non humani iuris memores.

(B) Ac tunc Arminius equo conlustrans cuncta, ut quosque advectus erat, reciperatam libertatem, trucidatas legiones, spolia adhuc et tela Romanis derepta in manibus multorum ostentabat ; contra fugacem Maroboduum appellans, proeliorum expertem, Hercyniæ latebris defensum ; ac mox per dona et legationes petivisse fœdus, proditorem patriæ, satellitem Cæsaris, haud minus infensis animis exturbandum quam Varum Quintilium interfecerint. meminissent modo tot proeliorum, quorum eventu et ad postremum eiectis Romanis satis probatum, penes utros summa belli fuerit.

(C) Post quæ rettulit Cæsar capiendam virginem in locum Occiæ, quæ septem et quinquaginta per annos summa sanctimonia Vestalibus sacris præsederat ; egitque grates Fonteio Agrippæ et Domitio Pollioni, quod offerendo filias de officio in rem publicam certarent. prælata est Pollionis filia, non ob aliud quam quod mater eius in eodem coniugio manebat ; nam Agrippa discidio domum imminuerat, et Cæsar quamvis posthabitam decies sestertii dote solatus est.

2. Ext. (A) :—(1) *Operatum*,—express this in Greek. (2) *Pila, Mucronibus*,—describe these. (3) Convert the sentence beginning, *Denserent ictus* and in extract (B) the sentence beginning, *Meminissent modo tot prœliorum* into direct narration. (4) Parse fully, giving at the same time the construction—rules :—(1) Prævisa, (2) disserit, (3) hærentia, (4) præusta, (5) sisterent, (6) trucidatas, (7) satellitem, (8) meminissent.

3. (*a*) *Vestalibus* :—Write a short explanatory note on these. (*b*) *Decies sestertii* :—Parse *sestertii*, and give the derivation of the word. Name the sum here mentioned in British or Canadian currency.

4. Translate, indicating any peculiarity of construction:—(1) At Romæ postquam Germanici valetudo percrebuit dolor, ira. (2) Ea Germanico haud minus ira quam per metum accepta. (3) Cappadoces in formam provinciæ redacti Quintum Veranium legatum accepere. (4) Seio Tuberoni legato tradit equitem campumque; peditum aciem ita instruxit. (5) Si limen obsideretur, si effundendus spiritus sub oculis inimicorum foret, quid deinde miserrimæ conjugi, quid infantibus liberis eventurum? (6) At si teneat exercitum, augeat vires, multa, quæ provideri non possint, fortuito in melius casura.

5. Translate:—

(D) EU. Venit hoc *mihi* in mentem, Megadore, ted esse hominem divitem,
factiosum: me item esse hominem pauperum pauperrumum:
nunc si filiam locassim meam tibi, in mentem venit,
te bovem esse, et me esse asellum: ubi tecum coniunctus siem,
ubi onus nequeam ferre pariter, iaceam ego asinus in luto,
tu me bos haud magis respicias, natus quasi nunquam siem;
et te utar *iniquiore*, et meus med or to irrideat;
neutrubi habeam stabile stabulum, siquid *divorti* fuat:
asini me mordicus scindant, boves incursent cornibus:
hoc magnum est periclum, me ab asinis ad boves *transcendere*.
ME. *Quam* ad probos propinquitate *proxume* te adiunxeris,
tam optimum est.

(E) EU. Nunc petit, quom pollicetur; *inhiat* aurum, ut devoret;
altera manu fert lapidem, panem ostentat altera.
Nemini credo, qui large blandust dives pauperi:
ubi manum inicit benigne, ibi onerat aliquam *zamiam*.
Ego istos novi *polypos*, qui, sicubi quid tetigerint, tenent.

(F) EU. Fide censebam maxumam multo fidem:
sed ea sublevit os mihi penissume.
Ni subvenisset corvos, periissem miser.
Nimis hercle ego illum corvom, ad me veniat, velim,
qui indicium fecit, ut ego illi aliquid boni
dicam: nam quod edit, tam duim, quam perduim.
Nunc, hoc ubi abstrudam, cogito solum locum.
Silvani lucus extra murum est avius.
crebro salicto oppletus: ibi sumam locum.
Certum est, Silvano potius credam, quam Fide.

6. (*a*) Note the construction of the words in Italics in ext (D), and write explanatory notes on those in ext. (E). (*b*) Comment on the forms *Fide* and *duim* in ext (F). (*c*) Distinguish between *foris crepuit* and *fores pulsavit*. (*d*) *trivenifica, trifurcifer*;—explain the etymology.

7. Parse and write down in the ordinary forms the equivalents of the following verbs, naming the mood and tense of each:—adaxint, duit, locassim, perplexarier, edim, prohibessis, impetrassere, rescisse, benedice, indicassis, fuat faxim

8. Explain the following words, both as to meaning and derivation:—Bubula censione, curionem, manubrium, temperi, Laverna, bacchanal, Lar, temeti, puteum, obsonium, nundinalis, phylacistæ, bellum, mecastor.

9. (*a*) Give a brief sketch of the life and writings of Plautus. (*b*) State the argument and dramatis personae of the Aulularia.

B. A. ORDINARY EXAMINATION.

GREEK AND ROMAN HISTORY AND LATIN PROSE COMPOSITION.

MONDAY, APRIL 18TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL. D.

(N. B.—*Candidates taking both Greek and Latin may omit any two of the questions in groups* (A) *and* (B), *severally.*)

(A) *History of Greece. The Peloponnesian War.*

1. By what line of policy did Athens seek to extend and consolidate her power during the period of her supremacy? What effects to her had this policy during the Peloponnesian War?

2. Give the general character of the events of the first ten years of the War.

3. (*a*) What grounds had Athens for anticipating success in the Sicilian Expedition? (*b*) Name the generals who were first appointed to command the Expedition, and give an estimate of their characters as leaders. (*c*) Describe the plan of operations advocated by them severally in the narrative of the council of war, as given by Thucydides in Bk. VI., and show which appeared to be the best.

4. Draw a map of Sicily, placing in it the chief towns mentioned in Bk. VI.

5. (*a*) Write short biographical notes on the following:—Pericles, Cleon, Sitalces, Brasidas, Critias. (*b*) An account of the battle of Aegospotami.

(B) *History of Rome*:—*The Twelve Cæsars.*

1. Give your estimate of the character of Augustus, with an account of his policy in conducting the home and foreign affairs of the empire.

2. (*a*) Name, with dates, the successor of Augustus, and point out the leading events of his reign. (*b*) Write a sketch of Sejanus.

3. Describe briefly the events at Rome of the year 69, A. D.

4. Comment on the law of "Majestas" and on the proceedings of the "Delatores."

5. (*a*) Name the Emperors of the Flavian House. (*b*) What important events occurred in the following years, A. D. :—9, 14, 64, 70, and 79 ?

(C) Translate into Latin :—

The name of Pompey is highly distinguished in Roman history his exploits are almost incredible ; and his eloquence was so great as to excite the admiration of Cicero himself. At the age of twenty-six he was sent into Africa by Sulla, the Consul, to subdue those states which had joined the enemy ; and having routed their forces and slain their generals, he returned to Rome and was allowed a triumph. He then cleared the seas of those pirates, who for many years had captured and destroyed the Roman ships ; and in a very short space of time gained other victories, which it would be tedious to enumerate In the midst of these successes his wife died ; and he himself was taken ill of a fever at Naples. However he soon recovered, to the great joy of his country-men, though it has been observed that it would have been well, both for himself and his country, had he been carried off by the disease.

INTERMEDIATE EXAMINATION.

LATIN PROSE COMPOSITION.

WEDNESDAY, APRIL 6TH, 1887 :—AFTERNOON, 2 TO 5.

Examiners, ... { REV. GEORGE WEIR, LL.D.
A. J. EATON, PH.D.

(A) From the moment that the report came that Nero had set out on his march, intense anxiety pervaded the whole city. Every day from morning till evening the forum was crowded with people who hoped that each hour might bring them some tidings, and every man wished to be among the first to hear them. A doubtful rumor arose that a great battle had been fought only three days before, that two horsemen had ridden off from the field to announce the defeat of the enemy. Whether this was true or not, there was no doubt that a letter had come from L. Manlius Acidinus himself, who commanded the army at Narnia. The letter was first read in the Senate, and then in the assembly of the people. But some still refused to believe. At last word was brought that messengers from the consul's army were on their way to Rome, and were approaching the city.

(B) Claudius wished to deprive Manlius and Junius of the honor which they expected from the Istrian war ; and so ardent was he that he hurriedly departed from Rome without his lictors, and scarcely took any rest on his journey. As soon as he arrived in Istria, he bade Manlius and

Junius begone; and said that the new legions, which had lately been sent, would find that a general had come who could carry on war in the Roman manner. These legions had been raised by Claudius; and he thought that nothing could resist their courage. He immediately laid siege to Nesactium, the chief city of the enemy; and the besieged, reduced to despair, slew their wives and children.

FIRST YEAR.

HISTORY OF GREECE AND ROME.

WEDNESDAY, APRIL 6TH, 1887:—AFTERNOON, 2 TO 5.

Examiner,.....A. J. EATON, M.A., PH.D.

(A) *History of Greece to the Peloponnesian War.*

1. Tell the story of the Argonautic Expedition, naming its leader, its object, and the chief heroes engaged in it.

2. (*a*) What were the rights and duties of the king? (*b*) Who formed the *βουλή* and what power had this council? (*c*) Describe the *agora*.

3. (*a*) What were the two leading races in Greece?

(*b*) To which of these did the *Spartans* belong? To which the *Athenians?*

(*c*) Who were the *Periœki*, *Helots* and *Metics?*

4. Name the four great Grecian Festivals, and give an account of the most important of these.

5. (*a*) Sketch the rise and growth of the Persian empire.

(*b*) Enumerate (simply, without enlarging upon them) the leading causes of the first Persian war.

(*c*) Describe the battle of Marathon, and give the date of the same.

(*d*) Who were the heroes of the Second Persian War? What were the critical battles of this war?

(*e*) What special Athenian and Spartan characteristics were displayed in both wars?

(*B*) *History of Rome to the close of the Second Punic War.*

1. (*a*) Briefly sketch the form of the early government of Rome, describing the duties and powers of the King, Senate, Comitia Curiata. (*b*) What changes did this constitution undergo in 510 B. C.? (*c*) What further progressive changes can you note in regard to the classes holding power, previous to the year 264 B. C.?

2. How had the public lands been acquired and how were they managed? Give the agrarian law of Cassius (B. C. 486.)

3. When and for what purpose were the Council of Ten, or Decemvirs, appointed? What were the results of their labors?

4. Write down in order, without entering into details, Rome's conquests in Italy.

5. State the cause, chief events, and the result of the war with Pyrrhus.

THIRD YEAR EXAMINATION FOR HONOURS, 1887.

I. GREEK

MONDAY, APRIL 25TH :—MORNING, 9 to 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you deem it necessary in any of the extt. given below :—

(A) Thucydides, Book VI. Chap. 46.

2. (*a*) Construe the sentence *καὶ οἱ στρατηγοὶ ἀεὶ ἐπιτηδείους*. (*b*) *ἀπ' ὀλίγης δυνάμεως* :—give the import of the preposition as here used. (*c*) *παρείχε* :—What is the subject? (*d*) In Chap. 37, translate from *οἷς γ' ἐπίσταμαι* * * *ὀλίγην οὖσαν*, showing the construction. (*e*) ibid. *παρὰ τοσοῦτον γιγνώσκω* :—give different interpretations.

3. Translate carefully the following extt., adding an explanatory note, grammatical or general, where you see meet :—(*a*) *τάχα δ' ἂν ἴσως, εἰ δίχα ἡμῶν τὴν δύναμιν λάβοιεν, ὅπερ νῦν σπεῦδομεν, καὶ πάνυ ἂν ξυνεπιθοῖντο μετὰ Σικελιωτῶν, οὓς πρὸ πολλῶν ἂν ἐτιμήσαντο ξυμμάχους γενέσθαι ἐν τῷ πρὶν χρόνῳ*. (*b*) *ὢν γὰρ ἐν ἀξιώματι ὑπὸ τῶν ἀστῶν, ταῖς ἐπιθυμίαις μείζοσιν ἢ κατὰ τὴν ὑπάρχουσαν οὐσίαν ἐχρῆτο ἔς τε τὰς ἱπποτροφίας καὶ τὰς ἄλλας δαπάνας· ὅπερ καὶ καθεῖλεν ὕστερον τὴν τῶν Ἀθηναίων πόλιν οὐχ ἥκιστα* (*c*) *καὶ ὁ στόλος οὐχ ἥσσον τόλμης τε θάμβει καὶ ὄψεως λαμπρότητι περιβόητος ἐγένετο ἢ στρατιᾶς πρὸς οὓς ἐπῆσαν ὑπερβολῇ, καὶ ὅτι μέγιστος ἤδη διάπλους ἀπὸ τῆς οἰκείας καὶ ἐπὶ μεγίστῃ ἐλπίδι τῶν μελλόντων πρὸς τὰ ὑπάρχοντα ἐπεχειρήθη*. (*d*) *καὶ τῷ μὲν Νικίᾳ προσδεχομένῳ ἦν τὰ* * * * *ἑτέροιν καὶ ἀλογώτερα*.

4. Translate :—

(B) Xenophon, Hellenics Book II., Chap. 3, §§ 47-49, inclusive.

5. (*a*) *ἀποκαλεῖ κόθορνόν με* :—give the force of *ἀπὸ* in this compound. (*b*) What was the estimate of Aristophanes and of Cicero, severally, of the character of Theramenes? (*c*) A short note on the value of the Hellenics from the historical point of view.

6. Translate :—

(C) Aristophanes, The Frogs, vss. (*a*) 354-371, and (*b*) 1482 1499.

7. What were the points criticised by the addition to the citations from Euripides of the phrase *ληκύθιον ἀπώλεσεν*?

8. (*a*) Name and give the scheme of the metres used severally in the above extt., and scan the first four vss. of each. (*b*) Note personal and political references. (*c*) Enumerate the extant dramas of Aristophanes, and give the date of the Frogs.

9. (*a*) What is the Parabasis? Describe its different parts. Is the

Parabasis of the Frogs complete? (*b*) Explain the following:—(1) *τὴν περὶ τῶν κρεῶν.* (2) *Φρυνίχου παλαίσμασιν.* (3) *οὐ Χῖος ἀλλὰ Κεῖος.* (4) *υἱος Σταμνίου.* (5) *ἀναγιγνώσκοντί μοι τὴν Ἀνδρομέδαν.* (6) *ἀναπαύλας ἐκτροπάς* (express in Latin). (7) *Διὸς Κορινθος.* (8) *Θρηκία χελιδών.* (9) *Κιμωλίας γῆς.* (10) *Μαμμάκυθοι.*

10. Translate:—

(D) Prometheus Vinctus, vss. 887-906.

11. In ext. (D):—(1) What is the subject of *ἐραστεῦσαι*, and how do you construe the Genitives in the same clause? (2) *παρθενίαν Ἰοῦς*:—explain this usage, and give its equivalent phrase. (3) *ἄπορα πόριμος*:—Cite other instances of the use of this rhetorical figure by Aeschylus.

12. Translate:—

(E) Pindar, Olymp. VII., vss. 1-35.

13. (*a*) Describe the custom referred to at the beginning of ext. (A), explaining the phrase *οἴκοθεν οἴκαδε.* (*a*) Derive and explain the words:—*καχλάζοισαν, κορυφάν ζωθάλμιος, ἀποινα, ξυνόν, ἀκλάρωτον, χρυσάμπυκα, σκυτάλα.* (*c*) Describe the occasion of an Epinician Ode. (*d*) An account of Pindar and of his poetry.

14. Translate:—

ὁ δὲ Φίλιππος πάλαι μὲν προφάσεως ἐπ' αὐτοὺς δεόμενος, τότε δὲ ταύτην λαβών, ὡς τὰς συνθήκας παραβεβηκόσι καὶ πρὸς τοὺς ἐχθροὺς τοὺς ἑαυτοῦ φιλίαν ἐσπεισμένοις, πόλεμον ἐπήνεγκεν. οἱ δὲ πεπόμφασι πρέσβεις εἰς Ἀθήνας περὶ βοηθείας, οἷς ὁ Δημοσθένης συναγορεύει, βοηθεῖν κελεύων τοῖς Ὀλυνθίοις, καί φησι τὴν Ὀλυνθίων σωτηρίαν ἀσφάλειαν εἶναι τῶν Ἀθηναίων· σωζομένων γὰρ τῶν Ὀλυνθίων οὐδέποτε ἥξειν εἰς τὴν Ἀττικὴν Φίλιππον, ἀλλὰ τοῖς Ἀθηναίοις ἐξουσίαν ἔσεσθαι πλεῖν ἐπὶ τὴν Μακεδονίαν, κἀκεῖ ποιεῖσθ τὸν πόλεμον· εἰ δὲ ὑπὸ Φιλίππῳ γένοιτο ἡ πόλις αὐτη, ἀνεῖσθαι τήν ἐπι τοὺς Ἀθηναίους ὁδὸν τῷ βασιλεῖ. φησὶ δὲ δυσμάχητον εἶναι τὸν Φίλιππον οὐχ ὡς ὑπείληπται, θαρσύνων ἐπ' αὐτὸν τοὺς Ἀθηναίους.

Libanius.

THIRD YEAR EXAMINATION FOR HONOURS.

II. LATIN.

TUESDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate:—

A. Juvenal, (*a*) Sat. viii., vss. 30-55, and (*b*) xiii., vss. 236-249.

2. (*a*) State the subjects of these satires severally and comment on Juvenal's mode of treatment. (*b*) *Nanum, Atlanta, Aethiopem, Europen*:—Give

the Greek for these, and note the social custom referred to. (*c*) Explain carefully the import of the following from ext. (*a*) :—(1) *Tamquam* feceris. (2) *ut* te conciperet. (3) *noblis* indocti. (4) *Juvenis*. (5) *Trunco* Hermæ (*d*) Explain the following from ext. (*b*) :—(1) Chrysippus. (2) Mite Thaletis ingenium. (3) Caedicius gravis. (4) Maris Ægaei rupem scopulosque frequentes exsulibus magnis. (Illustrate from Tacitus.)

3. Translate :—

B. Persius ;—(*a*) Sat. v., vss. 102-112, and (*b*), Sat. vi., vss. 43-56.

4. (*a*) Write short notes on :—certo puncto, examen, peronatus, Melicerta, frontem (cite in illustration from Horace and Juvenal), ne qua (note the quantity), salivam mercurialem, missa * * laurus (Give name and date), lutea gausapa, progenies terræ. (*b*) What is known of the life of Persuis ? Write a short critique on his style, and estimate his literary value.

5. Translate :—

C. Horace, Epistles, Book I., ep. xx., vss. 9-28.

6. (*a*) Describe the make-up of a book in the time of Horace. (*b*) Comment on the meaning of :—prostes, communis, in breve te cogi, plenus, ætas, inertes, mitteris, vinctus, occupet, sol tepidus, solibus aptum, præcanum. (*c*) Cite other personal references by Horace as to his parentage, early life, and education.

7. Translate :—

D. Tacitus, Histories Book I., Chap. 82.

8. (*a*) Derive and explain the word *lymphatis*. (*b*) 'Quatuor principes ;' 'trina bella civilia ;' 'haustæ aut obrutæ urbes ;' 'plenum exsiliis mare ;' —explain briefly these references.

9. Translate the following extt. :—(1) Proximam quamque culpam antequam paeniteret ultum ibat. (2) Nemo enim adhuc cui imputaretur. (3) Unde plures erant, omnes fuere. (4) Neque modum oneris quisquam neque genus quæstus pensi habebat. (5) Sine more et ordine militiæ, ut praætorianus aut legionarius insignibus suis distingueretur.

THIRD YEAR EXAMINATION FOR HONOURS.

III. GREEK AND LATIN PROSE COMPOSITION.

MONDAY, APRIL 25TH :—AFTERNOON, 2 TO 5.

Examiner,..... ..... REV. GEORGE CORNISH LL.D.

(A) Translate into Greek :—

1. No man is so senseless as to prefer toil and trouble to rest and quiet. 2. In the reign of Herod, wise men came from the East to Judea to worship the new-born king. 3. The Decemvirs were chosen on the condition of their drawing up laws for the good government of the people. 4. Is it not a matter of prime importance that all the citizens

should be loyal to the father-land and valiant to meet the enemy? 5. The cavalry kept harassing the enemy so that they could not advance any further into the country.

(B) Translate into Latin :—

Flaccus, the warmest partisan of Caius, now armed his followers with the weapons in his *atrium* which he had taken from the Salluvian Gauls; and the rabble streamed through the Velabrum and occupied the Aventine, the ancient citadel of plebeian rights. Caius felt no longer safe in the Forum, overshadowed by the Temple of Castor and Pollux which the consul had occupied as a guard-house, and he joined Flaccus on the Aventine. There was civil war in the streets of Rome. Opimius, with some Cretan archers who were present in the city, attacked the Aventine; the Senate seized on the younger of the sons of Flaccus, who had been sent to mediate; the Curia could not treat with an enemy on the sacred soil. The rabble of Flaccus was easily dispersed, and he with his eldest son was slain. Caius knelt in the Temple of Diana, and invoked upon his ungrateful countrymen perpetual discord; then escaping down the steep slope of the Aventine towards the river, he sprained his ankle, and with difficulty reached the Porta Trigemina, but it was closed against him; he fled up the river bank to the Pons Sublicius, and two devoted friends sold their lives in holding the bridge against his pursuers; but over the river, he found himself unable to flee further, and turning into the grove of Furina, he persuaded his sole surviving follower to slay him. Satuleius found the dead body there, and filling the head with lead, he secured from the government its weight in gold; a plebeian who brought the head of Flaccus was cheated of his reward.

THIRD YEAR EXAMINATION FOR HONOURS.

IV. GREEK AND ROMAN HISTORY.

Grote :—*Vols. I.-II.*

Mommsen :—*Vols. I.-II.*

Arnold :—*Vols. I.-III.*

TUESDAY, APRIL 26TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Give a general account of the nations of Asia Minor with whom the Greeks came into contact, and point out in what ways the Greeks were influenced by this intercourse.

2. (*a*) What were the chief Greek colonies on the West of Greece? (*b*) How were any of them concerned in the history of Greece proper?

3. (*a*) Give the Latin equivalents of the names of the leading Greek deities and heroes. (*b*) Narrate the legend of Demeter. (*c*) Distinguish between Iacchus and Dionysus. (*d*) What mental conditions among the early Greeks were favourable for the origin and growth of mythes?

4. Give a summary of Grote's chapter on the state of society and manners as exhibited in Grecian Legend.

5. An account of the physical geography and limits of Greece.

6. Describe the political condition of Athens before the time of Solon, and note the changes effected by him.

7. Expain the following terms with reference to the history, constitution, etc., of Rome:—Imperium; Auctoritas; Populus; Plebs; Classis; Comitia; Centuria; Dictator; Sella curulis, Censor.

8. Trace the development of the Roman Constitution from the beginning of the Republic down to the close of the Punic Wars.

9. What foreign enemies had Rome to contend with during the Republic?

10. Give the substance of Mommsen's chapter on the rise and growth of Roman literature.

B. A. EXAMINATION FOR HONOURS.

I. GREEK PROSE WRITERS.

TUESDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner ..... REV. GEORGE CORNISH, LL. D.

1. Translate, adding an explanatory note where you deem it necessary in any of the extt. given below:—

A. Thucydides, Book VI. Chap. 46.

2. (*a*) Construe the sentence *καὶ οἱ στρατηγοὶ ἀεὶ ἐπιτηδείους*. (*b*) *ἀπ' ὀλίγης δυνάμεως*:—give the import of the preposition as here used. (*c*) *παρείχε*:—What is the subject? (*d*) In Chap. 37, translate from *οἷς γ' ἐπίσταμαι* * * *ὀλίγην οὖσαν*, showing the construction. (*e*) ibid. *παρὰ τοσοῦτον γιγνώσκω*:—give different interpretations.

3. Translate:—

(B) Herodotus, Book IX. Chap. 98.

4. (*a*) *ἤχθοντο ὡς ἐκπεφευγότων*:—show the force of *ὡς*, and of the Genitive. (*b*) *ἀποβάθρας*:—describe these. (*c*) *παρακεκριμένον παρὰ τὴν αἰγιαλὸν*:—explain. (*d*) *τοῦ συνθήματος*:—Give the Latin for this term as here used.

5. Translate:—

(C) Xenophon, Hellenics, Book II., Chap. 3, §§47-49, inclusive.

6. (*a*) *ἀποκαλεῖ κόθορνόν με*:—give the force of *ἀπὸ* in this com-

pound. (*b*) What was the estimate of Aristophanes and of Cicero, severally, of the character of Theramenes? (*c*) A short note on the value of the Hellenics from the historical point of view.

7. Translate :—

(D) Aristotle, De Poetica, Chap. 6, §§ 15–19, inclusive.

6. (*a*) Define briefly the following terms :—*ποιητική, ἐποποιία, μίμησις, ῥυθμῷ καὶ μέλει καὶ μέτρῳ, ἐπεισόδιον, πρόλογος, τραγωδία.* (*b*) Give an account of the state of the text of this Treatise, and name the principal editors and commentators of the same.

8. Translate :—

(E) Demosthenes, De Corona, Cap. 270 :—*Οὐκ ἀπορῶν δ' ὅτι χρὴ * πόθεν γὰρ ἀλλοθεν*; How do you construe and explain *οὐδὲ γὰρ ὧν ἔτυχεν ἦν*?

9. (*a*) Translate, with explanatory notes, the following :—*Ἐπ Μνησιφίλου ἄρχοντος, συγκλήτου ἐκκλησίας ὑπὸ στρατηγῶν, γενομένης καὶ Πρυτάνεων καὶ βουλῆς γνώμη, Μαιμακτηριῶνος δεκάτῃ ἀπίοντος, Καλλισθένης Ετεονίκου Φαληρεὺς εἶπε.* (*b*) Translate the following extract :—*Δεδόχ θαι τῷ δάμῳ τῷ βυζαντίων καὶ Περινθίων Ἀθαναίοις δόμεν ἐπιγαμίαν, πολιτείαν, ἔγκτασιν γᾶς καὶ οἰκιᾶν, προεδρίαν ἐν τοῖς ἀγῶσι, πόθοδον ποτ τὰν βωλὰν καὶ τὸν δᾶμον πρατοις μετὰ τὰ ἱερά, καὶ τοῖς κατοικέειν ἐθέλουσι τὰν πόλιν αλειτουργήτοις ἦμεν πασᾶν τᾶν λειτουργιᾶν·* (*c*) Name the dialect of this extract, and state in what districts of Greece it was used,

10. (F) Æschines, Contra Ctesiphontem, §§ 159-160 (Ed. Teubner.). inclusive.

11. (*a*) Ext. :—*τὴν τάξιν ἐλιπέν. ἱερὰ ἱδρύσατο* Πανσανίου. Μαργίτην. Explain these references. (*b*) Translate and comment on the following from De. Cor. :—(1) *καὶ βοᾶς ῥητὰ καὶ ἄρρητα ὀνομάζων, ὥσπερ ἐξ ἀμάξης.* (2) *οὐ δ' ἐγὼ μὲν ἀθῶος ἅπασι, τοῖς νόμοις, τῷ χρόνῳ, τῇ προσθεσμίᾳ.* (3) *πολλῶν προαιρέσιων οὐσῶν τῆς πολιτείας, τὴν περὶ τὰς Ἑλληνικὰς πράξεις εἱλόμην ἐγώ.* (*c*) Distinguish between :—*δίκη* and *γραφή. νόμος, ψήφισμα* and *προβούλευμα.* (*d*) At what dates were these orations respectively delivered, and with what result?

12. Translate :—

(G) Plato, De Republica, Book I., chap. 24, §§ A to C, inclusive.

B.A. EXAMINATIONS FOR HONOURS.

II. GREEK POETS.

MONDAY, APRIL 25TH:—MORNING, 9 TO 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate, with an explanatory note when you deem it necessary:—

(A) Æschylus, Prometheus Vinctus, vss. 887-906.

(B) Æschylus, Seven against Thebes vss. 1026-1041.

2. (*a*) In ext. (A):—(1) What is the subject of *ἐραστεῦσαι*, and how do you construe the Genitives in the same clause? (2) *παρθενίαν Ἰοῦς*:—Explain the usage and give its equivalent phrase. (3) *ἄπορα πόριμος*:—cite other instances of the use of this rhetorical figure by Æschylus.

3. (*a*) Instance similarities of sentiment and of phraseology occurring in the Prom. Vinct., the Seven against Thebes, and the Antigone. (*b*) State carefully the meaning of the following expressions:—(1) *ὑμνοῖτο φροιμίοις πολυρρόθοις*. (2) *πυρὸς δίχα*. (3) *προσβολὴν νυκτηγορεῖσθαι*. (4) *πεπλων καὶ στεφέων ἀμφὶ λιτάν' ἔξομεν*. (Illustrate from the Iliad.) (5) *ἀκροβόλων ἐπαλξέων λιθὰς ἔρχεται*. (6) *τροφεῖα πληρώσει χθονί*. (7) *οὐ καπηλεύσειν μάχην*. (8) *φιμοὶ συρίζουσι*. (*c*) Scan the following vss., and point out any metrical peculiarities:—

Παρθενοπαίοις Ἀρκάς· ὁ δὲ τοιόσδ' ἀνήρ.
Ἱππομέδοντος σχῆμα καὶ μέγας τυπος.
Μεγαρεύς, Κρέοντος σπέρμα, τοῦ Σπαρτῶν γένους.
Ὅστις φυλάσσει πρᾶγος ἐν πρύμνῃ πόλεως.

4. Translate:—

(C) Sophocles, Antigone vss. 332-375.

5. (*a*) Set forth the theme of the above Stasimon, and show how the *Stasima* of this Drama are severally connected and their bearing on the action of the play. (*b*) The following variants occur in the same ext.; translate and comment on them:—(1) *πολλά τε—τά*. (2) *πο·εῦον—πολεύων*. (3) *περιφραδὴς—ἀριφραδὴς*. (4) *παραίρων—παρείρων—περαινων—γεραίρων*. (4) *ἀστυνόμους ὀργὰς ἐδιδάξατο*:—give different interpretations. (5) Construe vss. 1084-1086; 1105-6; 1155-57.

6. Translate:—

(D) Euripides Medea, vss.—824-855.

7. (*a*) Name the metre and scan strophe B in ext. (D). (*b*) What is the connection of this ode with the main action of the Drama? (*c*) What was the criticism of Aristophanes on the use of the Choral parts by Euripides? (*d*) Write explanatory notes on:—(1) *Ἐρεχ-*

θεῖδαι. (2) *ἐννέα* Il. M. *Ἁρμονίαν φυτεῦσαι.* (3) *ἀμφὶ Πειρήνης ὕδωρ.* 4) *πεσσοὺς προσελθών.* (5) *κρεισσόνων νικώμενοι*—*ἦ πεφύκαμεν σοφαὶ*) *μάλιστα* :—account for the change of gender with the same speaker.

8. Translate :—

(E) Aristophanes, The Frogs, vss. (*a*) 354-371, and (*b*) 1482 1499.

9. What were the points criticised by the addition to the citations from Euripides of the phrase *ληκύθιον ἀπωλεσεν*?

10. (*a*) Name and give the scheme of the metres used severally in the above extt., and scan the first four vss. of each. (*b*) Note personal and political references. (*c*) Give the date of the Frogs.

11. (*a*) What is the Parabasis? Describe its different parts. Is the Parabasis of the Frogs complete? (*b*) Explain the following:—(1) *τὴν περὶ τῶν κρεῶν.* (2) *Φρυνίχου παλαίσμασιν.* (3) *οὐ Χίος ἀλλὰ Κεῖος.* (4) *υἱὸς Σταμνίου.* (5) *ἀναγιγνώσκοντί μοι τὴν Ἀνδρομέδαν.* (6) *ἀναπαύλας, ἐκτροπάς* (express in Latin). (7) *Διὸς Κόρινθος.* (8) *Θρηκία χελιδών.* (9) *Κιμωλίας γῆς.* (10) *Μαμμάκυθοι.*

12. Translate :—

(F.) Theocritus, Idyll I., vss. 95-114.

13. (*a*) Describe the dialect of Theocritus, and point out words peculiar to it in ext. (F), and give their equivalents in Attic. (*b*) Explain the words *εἰδύλλια* and *βουκολικά.* (*c*) To what period of Greek Literature did Theocritus belong?

13. Translate :—

(G.) Pindar, Olymp. VII., vss. 1-35.

14. (*a*) Describe the custom referred to at the beginning of ext. (G), explaining the phrase *οἴκοθεν οἴκαδε.* (*b*) Derive and explain the words :—*καχλάζοισαν, κορυφάν, ζωθάλμιος, ἀποινα, ξυνόν, ἀκλάρωτον, χρυσάμπυκα, σκυτάλα.* (*c*) Describe the occasion of an Epinician Ode

15. Translate :—

Τοῦτον εὐτυχέστατον λέγω,
Ὅστις θεωρήσας ἀλύπως, Παρμένων,
Τὰ σεμνὰ ταῦτ' ἀπῆλθεν, ὅθεν ἦλθεν ταχὺ,
Τὸν ἥλιον τὸν κοινὸν ἀστέρ', ὕδωρ, νέφη,
Πῦρ. τἀυτὰ, κἂν ἑκατὸν ἔτη βιώσεται,
Ὄψει παρόντα, κἂν ἐνιαυτοὺς σφόδρ' ὀλίγους.
Σεμνότερα τούτων ἕτερα οὐκ ὄψει ποτέ.
Πανήγυριν νόμισόν τιν' εἶναι τὸν χρόνον,
Ὃν φημὶ, τοῦτον, κἀπιδημίαν βροτῶν.
Ὄχλος, ἀγορὰ, κλέπται, κυβεῖαι, διατριβαὶ.
Ἂν πρῶτος ἀπέλθῃς, καταλύσεις σὺ βελτίον,
Ἐφόδι' ἔχων ἀπῆλθες, ἐχθρὸς οὐδενί.
Ὁ προσδιατρίβων δὲ, κοπιάσας ἀπώλεσε.
Χαλεπῶς τε γηρᾶν, ἐνδεής του γίνεται,
Ῥεμβόμενος ἐχθροὺς εὑρ', ἐπεβουλεύθη πόθεν.
Οὐκ εὐθανατως ἀπῆλθεν ἐλθὼν εἰς χρόνον.

Memander.

B.A. EXAMINATION FOR HONOURS.

III. LATIN PROSE WRITERS.

WEDNESDAY, APRIL 20TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate the following extracts into English, adding a brief comment where any peculiar form or construction seems to you to require it :—

(A) Tacitus, Histories, Book I., chap. 82.

2. (*a*) Derive and explain the word *lymphatis*. (*b*) 'Quatuor principes'; 'trina bella civilia'; 'haustae aut obrutae urbes'; plenum exsiliis mare': —explain briefly these references. (*c*) Translate the following extt. :— (1) Proximam quamque culpam antequam paeniteret ultum ibat. (2) Nemo enim adhuc cui imputaretur. (3) Unde plures erant, omnes fuere. (4) Neque modum oneris quisquam neque genus quaestus pensi habebat. (5) Sine more et ordine militae, ut praetorianus aut legionarius insignibus suis distingueretur.

3. Translate :—

(B) Tacitus, Annals, Book II., chap. 88.

4. (*a*) *Priscis imperatoribus* :—Explain the reference. (*b*) *Absceden-tibus* Romanis :—Explain this use of the Tense. (*c*) *Lacessierit* :—Why the subjunctive? (*d*) *Alii reges et duces* :—Name them. (*e*) *Duodecim* potentiae :—Explain the chronology.

5. Translate and write explanatory notes on the following from Bk. I.— (1) L. atque A. arma in Augustum cessere. (2) Temporibus Augusti dicendis non defuere decora ingenia donec gliscente adulatione deterrerentur. (3) Donec provisis quae tempus monebat simul excessisse Augustum et rerum potiri Neronem fama eadem tulit. (4) Primavari castra lato ambitu et dimensis principiis trium legionum manus ostentabant.

6. Translate :—

(C) Livy, Book XXI., chap. 18 :—*Praeceps vestra* down to *aliquando pariat*.

7. (*a*) *At enim* :—Express in Greek, and show the force of the phrase; also give the import of *tamquam* and *ut*. (*b*) Explain the following terms :—sortes, libros adire, novemdiale sacrum, lustrata, lectisternium, supplicatio. (*c*) Describe the route of Hannibal from Spain into Italy. (*d*) From what tribes did he recruit his forces? How is the comparative fewness of Carthaginian soldiers in his army to be accounted for?

8. Translate :—

(D) Cicero, De Officiis, Book II., chap. 3 :—*occurritur autem nobis* down to *ut arbitror diligenter*.

9. Write a short account of this treatise, and give your estimate of its character and value.

10. Translate :—

(E) Cicero, De Imp. Cn. Pomp., chap. 2; §§ 4 and 5.

11. (*a*) *Honestissimis viris* :—explain the political, social, and commercial position and importance of the *Equites* as a class in the time of Cicero. (*b*) *Asiam* :—define the geography. (*c*) How did Pompey requite the efforts put forth by Cicero in his behalf? Can you cite from Cicero's letters any remarks on this point ?

12. Translate :—

Sed quod ad proeliatorum excellentem fortitudinem attinet, merito L. Sicinii Dentati commemoratio omnia Romana exempla finierit: cuius opera honoresque operum ultra fidem veri excedere iudicari possent, nisi ea certi auctores, inter quos M. Varro, monumentis suis testata esse voluissent. Quem centies et vigesies in aciem descendisse tradunt, eo robore animi atque corporis utentem, ut maiorem semper victoriae partem traxisse videretur: sex et triginta spolia ex hoste retulisse: quorum in numero octo fuisse, cum quibus, inspectante utroque exercitu, ex provocatione dimicasset: XIV cives ex media morte raptos servasse, quinque et XL vulnera pectore excepisse, tergo cicatricibus vacuo: novem triumphales imperatorum currus secutum, totius civitatis oculos in se numerosa, donorum pompa convertentem. Praeferebantur enim aureae coronae octo: civicae XIV: murales tres: obsidionalis una: torques LXXXIII, armillae CLX, hastae XVIII, phalerae XXV, ornamenta etiam legioni nedum militi satis multa.

Valerius Maximus.

B. A. EXAMINATIONS FOR HONOURS.

IV. LATIN POETS.

TUESDAY, APRIL 26TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you may deem it necessary on any peculiar form or construction :—

(A) Terence, Adelphi, Act IV., Sc. 1.

2. (*a*) Ext. (A)—(1) Supply the ellipses with :—utinam quidem nihilne in mentem? tanto nequior; hem tibi autem; nusquam tu me. (2) Fervit :—Explain the conjugation. (3) Quam ovem :—Why the Accus? (4) Potin ut desinas ;—Explain the construction. (*b*) Write short notes on :—(1) Lupus in fabula. (2) Locum reprehensum. (3) Liberali illam assero causa manu. (4) Injeci scruplum homini. (5) Patrissas. (6) Silicernium. (7) Mastigia. (8) Non posteriores faciam.

3. Translate :—

3. Translate :—

(B) Plautus, Aulularia, Act IV., Sc. 8.

4. (*a*) Ext. (B)—(1) Pici * * * colunt :—Explain the probable reference (2) Rex Philippus :—To whom is the reference and why? (3) Conlocavi in arborem :—Note the construction. (*b*) Name the metre of Ext. (B)

and scan any four verses. In what respect does it differ from the corresponding metre in Aristophanes? (*c*) Comment on the formation of the following words:—Sodes, cedo, sis, scibo, seorsum, frugi, prorsum, villi aibat, pultare, ellam, sedulo.

5. Translate:—

(C) Horace, Satires, Book I., Sat. x., vss. 20-39.

6. (*a*) What is the subject of sat. X.? And with what object did Horace write it? (*b*) On what grounds have some maintained that the first eight verses are spurious? (*c*) Seri studiorum:—What use of the Genitive? (*d*) Explain:—(1) Nota Falerni. (2) Canusini more bilinguis. (3) Neque in aede sonent. (4) Judice Tarpa.

7. Translate:—

(D) Juvenal, Sat. viii., vss. 39-55; and (E) Sat. x., vss. 250-264.

8. (*a*) Explain carefully the import of the following from the above ext.:—(1) *Tamquam* feceris. (2) *Ut* te conciperet. (3) *Nobilis* indocti. (4) *Juvenis*. (5) *Trunco* Hermæ. (6) *Ut primos*—inciperet. (*b*) Explain also the following extt. from Sat. x.:—(1) Pluma Sardanapali. (2) Ritu decies centena dabuntur antiquo. (3) Non nisi legitime vult nubere. (4) Usque ad delicias votorum. (5) Animam exhalasset opimam. (6) Madidis Sostratus alis.

9. Translate:—

(F) Persius, Sat. v., vss. 90-105.

10. (*a*) Give the etymology and meaning of the following words:—bruma, tetrico, uncto, vapida, varo, genio, olus, mergis, exossatus, artocreas. (*b*) Comment on the meaning of the following from Sat. v.:—(1) Curto centusse. (2) Varicosos centuriones. (3) Herodis dies. (4) Verte aliquid. (5) Lubrica Coa. (6) Sub sole recenti. (*c*) Derive and give the exact meaning of the term *Satira*.

11. Translate:—

(G)

Vitam quae faciant beatiorem,
Iucundissime Martialis, haec sunt:
Res non parta labore, sed relicta;
Non ingratus ager, focus perennis;
Lis nunquam, toga rara, mens quieta;
Vires ingenuae, salubre corpus;
Prudens simplicitas, pares amici;
Convictus facilis, sine arte mensa;
Nox non ebria, sed soluta curis;
Somnus, qui faciat breves tenebras:
Quod sis, esse velis nihilque malis;
Summum nec metuas diem, nec optes.

B. A. EXAMINATIONS FOR HONOURS.

TUESDAY, APRIL 12TH:—AFTERNOON, 2 TO 5.

V. GREEK PROSE COMPOSITION.

Examiner,..... REV. GEORGE CORNISH, LL.D.

Translate into Greek (accented):—

When the news of Magnesia reached the several potentates and commonwealths of the East, they seemed with one accord to recognize that the republic which had conquered Antiochus was the future arbiter of the world. Their ambassadors in their motley garbs arrived in Rome, and might be seen from the Forum crowding the open space of the Græcostasis, waiting for an audience of the Senate, "because in the Senate lay all their hopes of the future." No wonder that those august senators, who had been undismayed by Brennus and Pyrrhus, began to waver before this subtle enemy, adulation. The brave hearts, incorruptible by fear, were slowly enervated and demoralized as they recognized more clearly every year that they were gods—gods not in the old heroic sense in which Kineas had so styled them, but gods because crowned heads and ancient commonwealths had to grovel at their feet and offer them the incense of flattery and the presents of gold, and the sacrifices of slaughtered honour and truth, as was meet to the revolting idols ef Eastern worship.

B. A. EXAMINATIONS FOR HONOURS.

VI. LATIN PROSE COMPOSITION.

WEDNESDAY, APRIL 20TH:—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

Translate into Latin:—

Tiberius Sempronius Gracchus was quietly elected to the tribunate in 133 B.C. No one who saw him on the day of his election guessed what thoughts were agitating his fervent spirit. To understand him we must enter the circle of that stern Roman family in which he was brought up. His father was a noble, sprung from a plebeian branch of the Sempronian gens, but an ancestor had been consul in 215 B.C., and he had twice held that office, and twice he had triumphed; he had attained also the summit of a Roman noble's ambition, the censorship; and in the south side of the Forum, flanked by the Vicus Tuscus, might be seen the Basilica Sempronia, the permanent memorial of his *lustrum*. He was just the typical Roman over again; possibly a little more cultivated—he could speak Greek as easily as Latin; possibly a

little more humane—he won the hearts of the Spaniards for whom he negotiated a favourable treaty with the home government; and his love to his wife, the daugther of Scipio, was celebrated in the story that when the augurs said of the two snakes found in his couch, the one killed should portend his death or hers, he promptly killed the male, for he did not wish to survive her. But revolutionary thoughts were far from him; as censor in 169 B.C., he regulated the admission of freedmen to the tribes in the most conservative spirit, confining all who were not possessed of thirty thousand *asses* to the one city tribe Esquillia, thus reducing their influence to a minimum. But Cornelia, his wife, was not an ordinary Roman matron.

B. A. EXAMINATIONS FOR HONOURS.

VIII. HISTORY OF GREECE AND ROME.

TUESDAY, APRIL 26TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Write a general account of the Hellenic people in the early historical period, noting the four ties which held them together.

2. Describe the Institutions ascribed to Lycurgus, and state the principal aim of his legislation. To what causes may the decay of Sparta be attributed?

3. With what foreign nations in Asia Minor and elsewhere did Greece come into contact, and how was early Grecian civilisation thereby influenced

4. How may the variations of character, life and institutions among the states of Hellas be accounted for?

5. Explain in connection with the Athenian revenue system, the terms: *τέλος, εἰσφορά, ἐπίδοσις, τριηραρχία.*

6. To what point is the history of the Peloponnesian way brought down by Thucydides, and what other contemporary author has left an account of the final period?

7. Set forth the nature and uses of *Ostracism.* What pleas could be urged in its defence?

8. When did Pyrrhus invade Italy, and under what pretext? In what part of Italy did he wage war with the Romans, and what was the result of the war?

9. To what causes may the victory of Greece over Persia, and of Rome over Carthage, be severally assigned?

10. The political and social objects of the Gracchi, and the causes of their failure.

11. Show how far the forms and institutions of the Republic were kept up under Augustus and his immediate successors.

B. A. EXAMINATIONS FOR HONOURS.

VIII. GENERAL PAPER.

MONDAY, APRIL 25TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL. D.

1. (*a*) Enumerate the Dialects of the Greek Language, and point out their leading characteristics and the districts where they severally prevailed. (*b*) To what causes may the origin of these dialects be ascribed? (*c*) Give the futures, Attic and Ionic, of σημαίνω, καλέω, χαρίζομαι, σκεδάζω, and μένω.

2. (*a*) Give the principal rules, with examples and exceptions, for the accentuation of the Greek verb. (*b*) Accentuate, with the proper *spiritus*, the following ext. :—

(B) Τους μεν 'Αθηναιους οστις μη βουλεται ουτω κακως φρονησαι και υποχειριους, ημιν γενεσθαι ενθαδε ελθοντας, η δειλος εστιν η τη πολει ουκ ευνους· τους δ' αγγελλοντας τα τοιαυτα και περιφοβους υμας ποιουντας της μεν τολμης ου θαυμαζω, της δε αξυνεσιας, ει μη οιονται, ενδηλοι ειναι.

3. Parse and analyse the following forms :—βλῆτο, χύτο, ἔμολον, ὦρτο, ἐάλην, ἄωρτο, βίηφι, ἀνωχθι, ruri, rure, sicubi, ibi, aurai, divom.

4. Define Prepositions, and show how their import is modified by the cases with which they are construed.

5. Explain the use of the *Nom.*, *Gen.*, and *Acc. Absolute*, in Greek.

6. How did the Greeks divide the month, and distinguished the days of the month. Express the fifth, fifteenth, and twenty-fifth day of the month.

7. Account for the difference of the dialect in the chorus and dialogue of Greek Tragedy.

8. Describe the steps that had to be taken for putting a play on the stage at Athens.

9. What changes in the construction and representation of Attic tragedies are ascribed to Aeschylus, Sophocles, and Euripides, severally?

10. Give Donaldson's classification of Greek plays, with the substance of his remarks on the origin of Comedy and Tragedy among the Greeks. Give also the etymology of the terms τραγῳδία and κωμῳδία.

11. With what Greek dialect is Latin most closely connected?

12. What does Horace say of the style of Plautus? What value have his plays from a philological point of view?

Name the earliest Latin prose writers.

14. What is known of the life of Persius? Write a short critique of his style, and estimate his literary value.

MATHEMATIC AND NATURAL PHILOSOPHY.

FIRST YEAR.

GEOMETRY—ARITHMETIC.

TUESDAY, APRIL 12TH :—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
G. H. CHANDLER, M.A.

1. In a right-angled triangle if a perpendicular be let fall from the right angle on the hypotenuse, it divides the triangle into triangles which are similar to the whole and to each other.

a. If a tangent be drawn to a circle at one end A of a diameter AB, and from the other end B a line be drawn cutting the tangent in D and the circle in C, prove that if A and C be joined, $A\ C$ is a mean proportional between $B\ C$ and $C\ D$.

2. Divide a given straight line in extreme and mean ratio.

a. If the length of the line be r, find the lengths of the segments, and verify the work.

3. From a point outside a circle only two equal straight lines can be drawn to the circumference.

4. On a given right line construct a rectangle equal to a given pentagon

5. A gallon of water weighs 10 lbs. ; if a cubic inch weigh 252.5 grs. find the number of gallons in a tank whose sides are 4 ft. 3 ins. ; 6 ft. 4 ins. and 8 ft. 6 ins. long respectively.

6. If an angle of 15° corresponds to one hour ; find the time exactly corresponding to 23° 15′ 27″.

7. Describe a square that shall be equal to a given rectilineal figure.

8. The angle in a semicircle is a right angle, the angle in a segment greater than a semicircle is less than a right angle : and the angle in a segment less than a semicircle is greater than a right angle.

9. Inscribe an equilateral and equiangular pentagon in a circle.

10. Similar polygons may be divided into the same number of similar triangles, having the same ratio to one another that the polygons have ; and the polygons are to one another in the duplicate ratio of their homologous sides.

11. Express $\dfrac{3\frac{2}{3}}{2\frac{1}{3} - \dfrac{4}{3\frac{1}{3}}}$ cwt. as a decimal of a ton.

12. The true length of the year is 365.24222 days : if every fourth year were taken as leap year, in what time would the error in reckoning amount to one day?

FIRST YEAR.

TRIGONOMETRY—ALGEBRA.

WEDNESDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D. / G. H. CHANLDER, M.A.

1. Given the radius of a circle and the length of the arc subtending any angle at the centre, investigate a formula for determing the number of seconds in the angle.

(*a*) It is found that an upright rod which is known to be 6 feet high, subtends an angle of 10″ at the eye, find its distance approximately.

2. Trace the changes of sign of the tangent as an angle increases from 0 to 360°.

3. Prove (*a*.) $\tan (A + B) = \dfrac{\tan A + \tan B}{1 - \tan A \tan B}$;

(*b*.) $\dfrac{\cos A + \sin A}{\cos A - \sin A} = \tan 2A + \sec 2A$.

4. Find the continued product of $3\sqrt{8}$, $2\sqrt[3]{6}$, and $3\sqrt[4]{54}$.

5. Find the value of $\dfrac{\sqrt{a+x} + \sqrt{a-x}}{\sqrt{a+x} - \sqrt{a-x}}$ when $x = \dfrac{2ab}{b^2+1}$

6. Solve the equations:

(*a*.) $\dfrac{a}{b+x} + \dfrac{a}{b-x} = c$;

(*b*.) $\dfrac{6x+13}{15} - \dfrac{3x+5}{5x-25} = \dfrac{2x}{5}$;

(*c*.) $\dfrac{4x^2+5}{10} - \dfrac{2x^2-5}{15} = \dfrac{7x^2-25}{20}$;

(*d*.) $\dfrac{x}{a} - \dfrac{y}{b} = m$; $\dfrac{x}{c} + \dfrac{y}{d} = n$.

7. Find the number of degrees in a radian.

8. Find the sine, cosine, tangent and secant of 60°, and also of 120°.

9. Show that

(1) $\sec^2 A = 1 + \tan^2 A$;

(2) $(\operatorname{cosec} A - \cot A)^2 = \dfrac{1 - \cos A}{1 + \cos A} = \tan^2 \dfrac{A}{2}$;

(3) $\dfrac{\sin A + \sin B}{\cos A + \cos B} = \tan \left(\dfrac{A+B}{2}\right)$.

10. Show that

$(a^2 + b^2 + c^2)\ (x^2 + y^2 + z^2) - (ax + by + cz)^2 =$
$(ay - bx)^2 + (cx - az)^2 + (bz - cy)^2$.

11. Resolve $12x^2 - x - 1$, $3x^2 - 2x - 5$, and $12a^4 + a^2x^2 - x^4$ into factors.

12. There is a number of three digits, of which the last is double of the first; when the number is divided by the sum of the digits the quotient is 22; when by the product of the last two, the quotient is 11. What is the number?

INTERMEDIATE.

GEOMETRY—ARITHMETIC.

TUESDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. If a right line be divided into any two parts the square of the whole line is equal to the sum of the squares of the parts, together with twice the rectangle under the parts.

(*a*). Extend this to the case where the line is divided into any three parts

2. On a given straight line construct a segment of a circle containing an angle equal to three-fourths of two right angles.

3. Construct an isosceles triangle having each of its base angles double the vertical angle.

4. If the external vertical angle of a triangle be bisected, the bisecting line will cut the base externally into segments which are proportional the sides of the triangle.

5. If four right lines be proportional, the rectangle under the extremes is equal to the rectangle under the means.

(*a*). If a quadrilateral be inscribed in a circle the rectangle under the diagonals is equal to the sum of the rectangles under the opposite sides.

6. Find a third proportional to two given right lines.

7. Prove fully that angles at the centre of any circle are in the same ratio as the arcs on which they stand.

8. Find what decimal of a square mile one acre is.

9. A cubic foot of water weighs 1000 ounces, a gallon of water weighs 10 lbs., mercury is 13.5 times as heavy as water, find what fraction of a gallon 1000 ounces of mercury will fill.

10. How much per cent. is £2 13s. 6s. of £5 17s. 8d.

11. Find the least common multiple of 3, 5, 9, 6, 12.

12. Find the length of the diagonal of a square whose side is one foot long.

INTERMEDIATE.

TRIGONOMETRY AND ALGEBRA.

WEDNESDAY, APRIL 13TH :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Define a logarithm. State the four principal rules employed in calculations by logarithm. Prove the rule for roots.

(*a*) Extract the fifth root of 27 to three places of decimals.

2. Find the value of x that will satisfy the equation $2^x = 3$.

3. At mid-day the shadow of a pole which is 20 feet high is found to be 25 feet long. Calculate the sun's altitude, *i.e.*, the angle between the shadow and the line joining the end of it to the top of the pole.

4. The sides of a triangle are $a = 1500$, $b = 1342$, $c = 1110$; find the angle A.

5. Calculate the area of the triangle in question 4.

6. Give two sides of a triangle and the included angle, investigate a formula for determining the base angles, and convert it into a form adapted to logarithmic calculations.

7. Prove $tan\ (A-B) = \dfrac{tan\ A - tan\ B}{1 + tan\ A\ tan\ B}$.

8. Prove that the cosine of an angle is equal to the cosine of its supplement, but with an opposite sign.

(*a*) Find from the tables the sine, cosine, tangent, contangent and secant of 120°.

9. Given $cos\ A = \frac{5}{9}$ calculate $tan\ A$.

10. Solve the equations

$$\frac{x+2}{x-1} - \frac{4-x}{2x} = 2\tfrac{1}{3};$$

$$axy = c(bx + ay),\ bxy = c(ax - by);$$

$$a + x + \sqrt{a^2 + x^2} = b;$$

$$10(x + \tfrac{1}{2}) - 6x\left(\frac{1}{x} - \tfrac{1}{3}\right) = 23;$$

11. Prove that if $\frac{a}{b} = \frac{c}{d} = \frac{e}{f}$ then $\frac{a}{b} = \frac{a+c+e}{b+d+f}$

12. Find a number such that if $\frac{3}{8}$ths. of it be subtracted from 20 and $\frac{5}{11}$ths. of the remainder from $\frac{1}{4}$th. of the original number, 12 times the second emainde r shall be half the original number.

13. Simplify

$$\frac{x - \dfrac{x-y}{1+xy}}{1 + \dfrac{x(x-y}{1+xy.}}$$

14. Find the greatest common measure of $x^3 + a_3$ and $6(x_2 - 2a x - 3a_2)$.

15. Prove that $a^m \times a^n = a^{m+n}$ when m and n are positive integers. Prove that $a^0 = 1$, $a^{-5} = \frac{1}{a^5}$.

SESSIONAL EXAMINATIONS, 1887.

THIRD YEAR.

MECHANICS—HYDROSTATICS.

TUESDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. State the principle of the composition of forces, and describe an experimental mode of illustrating it. Show that there are limits to the weights that may be used in this experiment.

2. Find the resultant of two parallel forces acting in opposite directions. Show that in one case this is impossible, and state the effect in this case on the body.

3. A uniform bar, 4 ft. long, weighs 10 lbs., and weights of 30 lbs. and 40 lbs. are suspended from its two ends; where must the fulcrum be placed in order to produce equilibrium?

4. Describe the Burton system of pulleys of the first kind, and calculate the weight that will be sustained by a pull of 13 lbs. if there be 11 moveable pulleys.

5. If a body whose mass is m and weight W run down an inclined plane whose height is h, and if v be the velocity acquired, prove that

$$\frac{m v^2}{2} = Wh$$

(*a*) Show that this equation is also true if, instead of an inclined plane, we have a curve, and h be the difference of the heights of the body at the beginning and end of the motion.

6. If the length of the seconds pendulum in London be 39.139, calculate the value of g (dynamical measure of gravity) there.

7. The centrifugal force at the equator is 0.11126 feet per second. Explain this statement, and show that at a place whose latitude is l the part of the centrifugal force which diminishes gravity is $0.11126 \cos^2 l$.

8. If a surface of one square inch be placed in a vessel completely filled with water, and if the pressure on it be 2 lbs., what will be the pressure on one square foot placed $2\frac{1}{2}$ feet lower?

9. Describe any experiment showing the elasticity of gases; and state the law connecting the elastic force and the volume.

10. A cubical mass of iron (sp. gr. = 7.25) floats in mercury (sp. gr. 13.59), find the ratio of the whole volume to that of the part immersed, proving any formula employed.

11. Find a formula for determining the specific gravity of the mixture of two liquids, being given the volumes and specific gravities of the latter.

12. Describe the suction pump, and explain its action.

SESSIONAL EXAMINATIONS, 1887.

THIRD YEAR.

DESCRIPTIVE ASTRONOMY—OPTICS.

WEDNESDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Make a sketch of the orbit of the earth, marking the perihelion, aphelion, the solstices and the equinoxes, (defining these terms), and showing the inclination of the earth's axis to the sun at these points.

2. Account generally for the relative lengths of day and night at the same place at different seasons of the year; and at different places at the same season.

3. How is the spheroidal form of the Earth accounted for. Describe any experiment illustrating your explanation.

4. Account for the phases of the Moon.

5. What is the cause of a lunar eclipse? Why does it not take place oftener?

6. Explain and prove the formula for a concave spherical mirror

$$\frac{1}{D} + \frac{1}{d} = \frac{2}{r}$$

7. State the laws of refraction of light, and describe the mode of proving them experimentally.

8. A straight rod is dipped in water, making an angle of 15° with the surface, what is the angle made by the image of the part under water.

9. Assuming the formula, find the principal focus of a plano-convex lens of glass ($\mu = \frac{3}{2}$).

10. Find the magnifying power of the astronomical telescope.

B. A. ORDINARY EXAMINATION, 1887.

MECHANICS—HYDROSTATICS.

TUESDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Two forces, P and Q, act on the same point of a body at an angle of 120°, show from the principle of the composition of forces that if R be the resultant

$$R^2 = P^2 + Q^2 - P\,Q.$$

2. The moments of two parallel forces with respect to any point on their resultant are equal and opposite.

3. A uniform circular disc has a circular hole punched out of it extending from the circumference half way to the centre; show that the centre of gravity is then $\frac{1}{20}$th of the radius of the disc away from its centre, on the side opposite the hole.

4. Find the ratio of the Power to the Resistance when a body is resting on an inclined plane and the Power acts in a direction parallel to the base of the plane.

5. A cubic foot of cast iron (sp. gr. = 7·2) is observed to increase its velocity 3 feet every second, find the pressure that produces this acceleration.

6. If a body were to begin to fall to the earth from the distance of the Moon (suppose 60 radii of the earth) calculate how many yards it would fall through in half an hour.

7. The velocity acquired in running down an inclined plane is equal to that acquired in falling down the height of the plane.

8. Find the pressure in pounds to the square foot due to 32 feet head of water.

9. If 100 cubic inches of air have a temperature 32°, and a pressure 29·922 inches; if the temperature become 60°, and the pressure 30 inches, calculate the volume.

10. A cubic foot of cork (sp. gr. = .24) is kept below water by means of a string fastened to the bottom of a vessel containing the cork, find the tension of the string.

11. Explain the mode of finding the height of a mountain by barometric observations, including the corrections for temperature.

12. Water is 770 times as heavy as air, at what depth in a lake would a bubble of air be compressed to half the density of water, supposing Boyle's law to hold good throughout for compression.

B.A. ORDINARY EXAMINATION.

ASTRONOMY—OPTICS.

WEDNESDAY, APRIL 13TH :—MORNING, 9 TO 12.

Examiner, ... ALEXANDER JOHNSON, LL.D

1. Define the *eccentricity* of the earth's orbit and calculate it, assuming that the sun's least and greatest apparent diameters are 31′ 30″. 2 and 32′ 34″. 6 : Calculate also in miles how much nearer the sun is to the earth in winter than in summer, assuming the mean distance of the earth from the sun to be 92 millions of miles.

2. What is meant by the *precession of the equinoxes?* Explain it, stating the physical cause. What trace do we find of it in comparing the name and the position of a certain point on the celestial sphere?

3. Prove that for objects within 80° of the zenith the correction for refraction is proportional to the tangent of the *zenith distance.*

(*a*) Given that the refractive index of air at the temperature 50° and pressure 29.96 is 1.0002836, prove that the refraction in seconds is given by the equation

$$r'' = 58''.49 \tan Z$$

and calculate its amount for a star whose *attitude* is 72°.

4. The length of the shortest shadow of an upright pole on the day of the vernal equinox was found, at a certain place, to be equal to the length of the pole itself, find the latitude of the place.

5. Prove that half the angle subtended at the earth by a section of her shadow made at the distance of the moon is equal to the sum of the parallaxes of the sun and moon, minus the sun's semi-diameter. What use is made of this angle in calculating eclipses of the moon ?

6. How would you, by observing the lengths of the shadows of an upright pole, determine 1° midsummer day, 2° the obliquity of the ecliptic approximately. Explain ?

7. Mars is stated to have a *retrograde* motion in opposition, a *direct motion* in conjunction, with two stationary points intermediate. Explain these terms and account for the facts.

8. A ray of light starting from a point Q on the axis of a spherical mirror is reflected from the mirror and cuts the axis again at a point q, prove that the distances of these points from the surface are to each other in the ratio of their distances from the centre.

9. Prove that the focal length a *convex* mirror is a mean proportional between the distances of two conjugate foci from the principal foci.

10. It is found that the image of a candle flame formed by a convex lens is at the same distance from the lens as the candle is, find this distance in terms of the focal length.

11. Show that the dispersion produced by a *convex* lens of crown glass (dispersive power .036) of 1 inch aperture and 3 ft. focal length is the same in magnitude as that produced by a *concave* lens of *flint* glass (dis power = .048) of same aperture and 4 ft. focal length, and that they will *achromatize* each other.

(*a*) Find the focal length of the lens formed by the combination of the two.

12. Given the object speculum of a Gregorian telescope of 3 ft. focal length and an eye-glass of 1 inch focal length; find the focal length of the secondary concave mirror, which will render the telescope capable of magnifying distant objects 700 times.

B. A. ORDINARY AND THIRD YEAR.

EXPERIMENTAL PHYSICS—*Electricity, Magnetism and Sound.*

THURSDAY, APRIL 7TH:—MORNING, 9 TO 12.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. Describe any experiment from which it is concluded that electricity is confined to the surface of bodies.

2. Define and explain clearly *electrical potential* at a given point, also *difference of potential* between two points. Where is the place, in practice, of zero potential?

3. Describe Sir W. Thomson's *quadrant electrometer*, and the mode of using it for showing the existence of a difference of potential between the two poles of a Grove's Cell.

4. How would you magnetise a needle by frictional electricity?

5. Define *magnetic dip*, and describe the dip needle. State the magnetic elements at any place.

6. A current of electricity is flowing along a straight wire; how would you determine practically the direction of the current? State the rule.

7. Define *electrical resistance*, *electromotive force*, and *strength of current*, and name the units for the two latter. A galvanometer offering no sensible resistance is deflected 50° by a cell connected with it by short thick wires. If a resistance of 3 ohms be put in the circuit the deflection is °. Find the internal resistance of the cell.

8. A mile of cable with a resistance of 3.59 ohms was put in water with the end *B* insulated; its core having been pricked with a needle, the resistance tested from the end *A* was found to be 2.81 ohms. *A* being insulated, a test from *B* showed the resistance to be 2.76. Find the distance from *A* to the injured spot.

9. The two ends of a wire are joined to two points of a voltaic circuit;

how may it be shown that the current divides at these two points? Find formulæ for determining the strengths of the three currents which have then to be considered.

10. State the velocities of sound in air, water, and steel wire respectvely. What is the effect of a rise of temperature in air? Give the relation between the velocity, elasticity and density in the different media.

11. On what physical cause does the *pitch* of a musical note depend, on what its *loudness*? How is the wave length corresponding to a particular note calculated, the necessary data being granted?

12. When an open organ pipe is sounding its fundamental note, in what way is the air in the pipe divided?

B.A. ORDINARY EXAMINATIONS, 1887.

EXPERIMENTAL PHYSICS (*Additional*).

LIGHT—HEAT.

FRIDAY, APRIL 22ND:—MORNING, 9 TO 12.

Examiner,..... ... .ALEXANDER JOHNSON, LL.D.

1. Describe an experiment by which it may be shown that more light (or heat) falls on a given plane surface when the rays strike it perpendicularly than when they strke it obliquely. How is this principle used to explain in part the difference of temperature in summer and in winter?

a. State and prove the mathematical law which is applicable.

2. Describe Newton's manner of forming the solar spectrum, and name the colours in their order from the *most refrangible* to the least refrangible. What is the effect of using prisms of different substances when the deviation produced is the same?

3. Explain the dark lines in the solar spectrum.

4. Describe Fresnel's experiment for showing the *interference* of light.

5. Describe the mode of formation of *Newton's rings*, and explain them.

6. Give the physical theory of polarized light.

7. Define *coefficient of linear expansion* of a solid.

8. Describe any experiment showing the unequal *Conductivity* of different solids.

9. State Newton's *law of cooling*. How far is it correct?

10. Investigate a formula for determining the specific heat of a body by the *method of Mixture*?

11. State the dynamical theory of heat, and illustrate it by two examples.

12. Air compressed in a strong vessel is suddenly allowed to escape through a stop-cock and strike on the face of a thermo-pile. State and explain the action of the galvanometer connected with the latter.

HONOUR EXAMINATIONS 1887.

FIRST YEAR—GEOMETRY.

MONDAY, APRIL 25TH:—MORNING 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Any quadrilateral is divided by a straight line into two others; prove that the intersections of the diagonals of the three lie in a straight line.

2. Describe a circle such that the radical axes of it and each of three given circles shall pass respectively through three given points.

3. If on the three diagonals of a complete quadrilateral, as diameters, circles be described, they shall have the same radical axis, and cut orthogonally the circle circumscribing the triangle formed by the three diagonals.

4. The polar of a given point with respect to any circle of a co-axal system will always pass through a fixed point.

5. Reciprocate the theorem that the opposite sides of a hexagon inscribed in a circle, when produced to meet, will have the three points of intersection collinear. Explain the process.

6. Given any three legs of an harmonic pencil and the relative position of the fourth leg. Construct the pencil, and show that there can be only one pencil fulfilling the conditions.

7. Through a given point draw a straight line so as to form with the sides of a given angle a triangle of given area.

8. If any two chords be drawn through the middle point of a given chord of a circle, the straight lines joining their extremities, which are on opposite sides of the bisected chord, cut off equal parts from its ends.

9. Describe a circle passing through a given point and touching a given straight line at a given point.

10. If perpendiculars be drawn from any point on the circumference of a circle to the sides of an inscribed triangle their feet shall be on the same straight line.

11. Given the base of a triangle, the sum of sides, and difference of base-angles. Construct the triangle.

12. Given the base and vertical angle of a triangle, find the locus of the centre of the inscribed circle.

HONOUR EXAMINATIONS, 1887.

FIRST YEAR.

THEORY OF EQUATIONS —— ALGEBRA.

TUESDAY, APRIL 26TH :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Prove without assuming any theorem as to the number of roots, that if two numbers substituted for x in a rational integral expression $f(x)$, give results with contrary signs one root at least of the equation $f(x) = 0$ ies between those values of x.

2. If $f(x)$ involves only *odd* powers of x and the coefficients are all of the same sign, the equation $f(x) = 0$ has no real root except $x = 0$.

3. Transform any given equation into another, the roots of which are m times as great as those of the given equation.

4. Explain the method of determining the equal roots of any given equation, and apply it to solve the equation

$$x^3 - 7x^2 + 16x - 12 = 0.$$

5. Solve the equation $x^3 - x + 6 = 0$.

6. So ve the equation

$$x^4 + 4x^3 - 5x^2 + 4x + 1 = 0.$$

7. The sum of an infinite geometric series is 2 and the sum of its first two terms is $2\frac{2}{3}$; find the series.

8. Fine the number of combinations that can be made out of the word "Canadian," taken three together.

9. Show by the method of Indeterminate coefficients that

$$\sqrt{1 + x + x^2 + x^3 + \&c.} = 1 + \tfrac{1}{2}x + \tfrac{3}{8}x^2 + \tfrac{5}{16}x^3 \&c.$$

10. Prove the truth of the binomial theorem when the index is a positive fraction.

11. Find a formula for determining the number of years in which a sum of money at a given rate will double itself at compound interest.

12. State and prove the rule for reducing a mixed circulating decimal to a vulgar fraction.

B.A. HONOURS IN MATHEMATICS AND NATURAL PHILOSOPHY.

LUNAR THEORY AND NEWTON'S PRINCIPIA.

FRIDAY, APRIL 1ST, 1887.

Examiners, ... { REV. PRINCIPAL ADAMS, D.C.L.
PROF. H. T. BOVEY, M.A., M. INST. C.E.

1. Define the terms mean anomaly, true anomaly, eccentric anomaly.

Find the mean anomaly in terms of the true in a series ascending according to powers of e as far as e^2.

2. What are the three forces into which the accelerating forces acting on the moon can be resolved?

Give their equivalents in differentials leaving time for the independent variable, and find the differential equation of the moon's latitude.

3. Prove the differential equations for the motion of the moon, supposing its orbit in the Ecliptic

$$u + \frac{d^2 u}{d\theta^2} = \frac{P}{H^2 u^2} - \frac{T}{H^2 u^3} \frac{du}{d\theta} \;\&\; \frac{d H^2}{d\theta} = \frac{2 T}{u^3}.$$

4. Determine u in the second order

$$u = a \{1 - \tfrac{3}{4} k^2 - \tfrac{1}{2} m^2 + e \cos.(c\theta - a) - \tfrac{1}{4} k^2 \cos. 2(g\theta - \gamma)$$
$$+ m^2 \cos.\{(2 - 2m)\theta - 2\beta\} + \frac{15}{8} m e \cos.[(2 - 2m - c)\theta - 2\beta + a].$$

5. What is meant by the moon's parallax? Shew that to the second order the variable part of the parallax is independent of the inclination.

6. Explain the variation of the inclination and the irregularity in the motion of the moon's node, expressed by the second of the following terms in the moon's latitude.

$$k \sin.(g\theta - \gamma) + \tfrac{3}{8} m k \sin.\{(2 - 2m - g)\theta - 2\beta + \gamma\}.$$

7. Quote Newton's three axioms of laws of motion and the 6 corollaries given on them.

8. The vanishing subtense of the angle of contact in all curves which have finite curvature at the point of contact is ultimately in the duplicate ratio of the chord of the conterminous arc.

9. A body moves in the circumference of a circle, required the law of centripetal force tending to any given point.

What would the law be for a point on the circumference of the circle?

10. A body moves in a Parabola; required the law of centripetal force to the focus.

11. The orbit in which a body moves revolves round the centre of force with an angular velocity which always bears a fixed ratio to that of the body. Shew that the body may be made to move in the revolving orbit in the same manner as in the orbit at rest by the action of a force tending to the same centre.

12. Force $\propto$ (dist.)$^{-2}$ Two bodies S. and P. revolve round a third T in such a manner that P describes the interior orbit, to shew that P will describe round T areas more nearly proportional to the times, and a figure more nearly resembling an ellipse if T be acted on by the attractions of the other two, than if it were ether not attracted by them at all or attracted much more or much less.

If P's orbit is originally circular, state and prove when the curvature of the disturbed orbit will be greatest and least.

B.A. HONOURS IN MATHEMATICS AND NATURAL PHILOSOPHY.

ASTRONOMY.

MONDAY, APRIL 4TH.

Examiners,..... { REV. PRINCIPAL ADAMS, D.C.L.
PROF. H. T. BOVEY, M.A., M. INST. C.E.

1. Shew how to determine the meridian and latitude of a place by observations made with an altazimuth on a circumpolar star.

2. In N-latitude 45° the greatest azimuth attained by one of the circumpolar stars, is 45° from the N-point of the Horizon. Prove that the star's polar distance is 30°.

3. Describe the arrangement of the axes of motion and graduated circles of an equatorial telescope, and state the errors of adjustment to which it is liable.

4. If the telescope be fitted with a divided object-glass, shew how to measure by it the distances between the cusps of the partially eclipsed sun and the rate at which that distance increases.

5. Explain the annual course of changes in the length of the day at places in mean latitude, on the Arctic Circle and on the Equator.

6. Prove that at a place on the Arctic Circle the daily displacement of the point of sunset is equal to the sun's change in longitude during the same interval.

7. Explain how mean time and apparent time are reckoned. Define equation of time, and prove that it vanishes four times a year.

8. A clock at Cambridge keeps Greenwich meantime ; what time did it indicate when the sun's preceding limb arrived at the Cambridge meridian on January 6th, 1875 ? Longitude $22^s.75$ E, sun's semi-diameter passed meridian in $1^h\ 10^s.62$, equation of time $6^m\ 2^s.88$.

9. Find the duration of twilight on a given day at a given place. Which is longest and which shortest season ? Explain Trade Winds, and quote Kepler's Laws.

10. Account for the error of aberration in the observed position of (1) a star, (2) a planet.

Prove that all stars are displaced by aberration towards the same point on the Ecliptic.

When has a planet *no* aberration ?

11. Determine the position of the ecliptic relatively to the horizon and the meridian at a given instant of a given day.

12. State briefly (*a*) the causes of eclipses, solar and lunar.

(*b*) Methods of finding longitude by observation.

(*c*) Bode's law, and what discovery upset it ?

(*d*) The meaning of stationary point and retrograde motion of a planet.

(*e*) The reason transits of Venus are more useful than those of Mercury for determining the sun's parallax.

FACULTY OF ARTS.

B.A. HONOUR EXAMINATION IN MATHEMATICS AND NATURAL PHYLOSOPHY.

THEORY OF ATTRACTION AND ELECTROSTATICS.

WEDNESDAY, 6TH APRIL :—MORNING 9, A.M.

Examiners,..... { REV. PRINCIPAL ADAMS, D.C.L.
PROF. H. T. BOVEY, M.A., M. INST. C.E.

1. Define the term Potential, and shew that the variation of the Potential at any point in any direction is the attraction in this direction on a unit mass at the point.

2. Prove that the attraction of a uniform bar A B of unit section upon a point O, at a distance N form the bar is $\frac{2\mu}{h} \sin\frac{A\,O\,B}{2}$, and that its direction bisects the angle A O B.

Hence shew that if A and B are the foci of a lemniscate that the component of the attraction on any point of the lemniscate along the line joining it to either focus is constant.

3. Define "tubes of force" and "level surfaces." Shew that the level surfaces at O in the preceding question are spheroids.

4. Find the resultant attraction of a uniform circular disc, every particle of which attracts with a force varying inversely with the square of the distance on a particle in a straight line through its centre perpendicular to its plane.

Shew that the attraction of a cylindrical mass of matter of density ρ, height h, and radius a, upon a particle at the centre of one of the end sections is $2\pi\rho . a \left(1 - tan\frac{\alpha}{2}\right)$ where $\tan\alpha = \frac{a}{h}$, and deduce the attraction for a uniform bar of small section upon a particle at one end.

5. A thin spherical shell with its centre at a point C attracts an external particle P. Shew that if a right cone with its vertex P be drawn so as to envelope the shell, the plane of contact will divide the shell into two parts, exerting equal attractions upon P.

Hence, shew that if the attracting mass be a solid sphere it will be divided into two equally attracting parts by the sphere described upon C O as diameter.

6. An attracting shell is bounded by two non-centric spheres; shew how to find the resultant attraction upon a particle.

The diar. of the internal is a radius of the external sphere, and the particle is placed on the surface of the former in a plane perpendicular to the common diar.; find the resultant attraction.

7. V is the potential of any attracting masses at the point (x, y, z), prove that

$$\frac{d^2V}{dx^2} + \frac{d^2V}{dy^2} + \frac{d^2V}{dz^2} = o \text{ or } -4 \cdot \pi \rho,$$

according as the point is without all, or within one of the masses, ρ, in the latter case being the density at that point.

8. M_1 is the quantity of attracting matter *within* a closed surface, M_2 that upon the surface; $\frac{dv}{dp} dS$ is the normal attraction on an element d S of the surface, shew that

$$\int \frac{dv}{dp} \cdot dS = 4\pi M_1 + 2\pi . M_2,$$

Hence shew (a) that every *level* surface must inclose masses of matter unless it be the outer boundary of a space in which the potential is constant. (b) that a point of max. or min. potential must be a centre of attraction and cannot be a void space.

9. Find the law of density of a solid sphere so that it may attract an internal particle distance according to the law $\phi(x)$, x being the distance of the particle from the centre. Ex $\phi(x) \propto x$.

10. Prove that at all points in empty space on a given line of force the resultant attraction is inversely proportional to the normal sections of the tube of force at these points.

11. Prove that two confocal homogeneous ellipsoids exert on the same external point attractions, which are in the same direction and which are proportional to the masses of the attracting ellipsoids.

FACULTY OF ARTS.

B.A. HONOURS IN MATHEMATICS AND NATURAL PHILOSOPHY.

DIFFERENTIAL EQUATIONS.

DIFFERENTIAL AND INTEGRAL CALCULUS.

Examiners,..... { Rev. Principal Adams, D.C.L.
Prof. H. T. Bovey, M.A., M. Inst. C.E

Friday, 15th April, 1887.—Morning, 9 a.m.

1. Define a differential equation: What is meant by its species order and degree? What is a general solution and complete primitive? From equation $(x - a)^2 + (y - b)^2 = c^2$, find the general differential equation of a circle free from arbitrary constants.

2. If V, v, be explicit functions of the two variables x and y, then if V be expressible as a function of v, $\frac{d V}{d x}\frac{d v}{d y} - \frac{d V}{d y}\frac{d v}{d x} = 0$ is identically satisfied. Prove this and the converse.

Solve $\frac{d y}{d x} + P y = 0$.

3. The one necessary and sufficient condition that the first side of the equation $M d x$ and $N d y = 0$ is an exact differential is $\frac{dM}{dy} = \frac{dN}{dx}$,

Solve $x\,d\,x + y\,d\,y + \frac{x\,d\,y - y\,d\,x}{x^2 + x^2} = 0$.

4. Solve the equation—

$$x \frac{d y}{d x} - a y + b y^2 = c x^2;$$

also the equation

$$y = x \frac{d y}{d x} + a \frac{d x}{d y}.$$

What is the singular solution in this case? Interpret the result geometrically.

5. Prove that the variables in the differential equation

$$\frac{d y}{d x} = \frac{y (x + y) + b^2}{x (x + y) + a^2}$$

may be separated by the substitutions $x = a + v$, $y = k u - v$, if k be properly chosen, and integrate the equation.

6. Solve the equations—

(a) $\frac{d^2 y}{d x^2} - 4 \frac{d y}{d x} + 13 y = 0$;

(*b*) $1 + \frac{d y_2}{d x} + y \frac{d^2 y}{d x^2} = 0$;

(*c*) Determine the class of curves in which the radius vector = the normal (two cases).

7. Find the condition that $P\,d\,x + Q\,d\,y + R\,d\,z = o$ shall be derivable from a single primitive, and solve

$$(y + a)^2\,d\,x + z\,d\,y - (y + a)\,d\,z = o.$$

8. Solve the simultaneous differential equations—

$$\left.\begin{aligned} \frac{d x}{d t} + 5\,x - 2\,y &= 2e^t \\ \frac{d y}{d t} - x + 6\,y &= e^{2t}. \end{aligned}\right\}$$

9. Solve—

(*a*) $\frac{d^2 z}{d x\,d y} = x^2 + y^2$;

(*b*) $\frac{d^2 z}{d x^2} - a^2 \frac{d^2 z}{d y^2} = o.$

10. Eliminate the arbitrary constants α, β, from $y = \alpha\, e^{ax} + \beta\, e^{bx}$, and the arbitrary functions from $z = \frac{y^2 \phi(y) + x}{1 - x\,\phi(y)}$.

11. Transform the equation

$$x^2 \frac{d^2 y}{d x^2} + a\,x + \frac{d y}{d x} + b.y = o,$$

into another, in which θ is the independent variable having given $x = e^\theta$.

12. Find the curve,

(*a*) Such that the radius of curvature at any point (x, y) is proportional to the square of the ordinate;

(*b*) Of given length and enclosing with the line joining its extremities a maximum area.

13. Shew that the moment of inertia of a body with respect to any axis is equal to its moment of inertia with respect to a parallel axis drawn through its c. of g., added to the product of the mass of the body into the square of the distance between the parallel axes. A solid is described by the revolution of the area $y = a\,e^{b\,x}$ around the axis of x. Find the moment of inertia of this solid between the limits $x = o$ and $x = h$, (*a*) with respect to the axis of x, (*b*) with respect to an axis through the c. of g. of the solid perpendicular to the axis of x.

FACULTY OF ARTS.

B.A. HONOURS IN MATHEMATICS AND NATURAL PHILOSOPHY.

MECHANICS—GENERAL PAPER.

FRIDAY, APRIL 22ND, 1887:—MORNING, 9 A.M.

Examiners,..... { REV. PRINCIPAL ADAMS, D.C.L.
PROF. H. T. BOVEY, M.A., M. INST. C.E.

1. What is meant by the "equation of continuity" in Hydrodynamics? How may this equation be integrated when a homogeneous liquid moves in one plane, the motions of all the particles being symmetrical with regard to a fixed centre?

2. Define the "lines of motion" at a point in a fluid in motion. What surfaces do they always cut at right angles? In the case of steady motion of an incompressible fluid in two dimensions when $udx + vdy$ is a perfect differential, shew how to find the pressure.

If the lines of motion are similar hyperbolas, prove that they are also equilateral.

3. A hollow cylinder of indefinite length is filled with homogeneous air, a portion of which is disturbed in such a way that all the particles in any section, perpendicular to the axis, are under the same initial circumstances of displacement; required resulting motion.

4. To determine the notes which can be produced from a tube closed at one end.

Distinguish between nodes and loops.

5. Water flows into a vessel in the form of a paraboloid through an orifice of area A under the head H, and escapes through an orifice at the vertex of area a ($< A$). How high will the water rise in the vessel? In what time does it rise to this height?

6. A diving bell is in the form of a surface of revolution such that, as the top of the bell is lowered uniformly, the surface of water within rises uniformly up the axis; prove that the generating line of the surface is a rectangular hyperbola.

7. Two rectangular axes turn round the origin in the plane (xy). Determine at any instant the accelerations of a point parallel to these axes in terms of the velocities.

A particle is placed in a smooth straight tube which is rigidly connected with the origin O by a rod ON perpendicular to the tube, and turns round O with a uniform angular velocity ω, in a horizontal plane. Investigate the motion of the particle, and find the pressure of the particle on the tube.

8. Investigate the differential equation of the path of a particle under a

central force, and show that pv = a const., is a general equation for central forces, v being the velocity of the particle at any point, and p the perpendicular from the centre to the tangent to the path at that point.

9. An endless elastic string of mass m in the form of a circle of radius a is set rotating about its centre on a smooth horizontal table. Find the angular velocity so that the string will just stretch to double its natural length.

10. A particle moves on a rough surface under the action of no forces, prove that its path is a geodesic.

11. A particle describes an ellipse under the action of a centre of force at one focus; shew how the *direction* of motion at any point may be changed, without changing the position of the apse line or the magnitude of the velocity.

12. A particle is projected from a point A with a velocity V, and moves under the action of a central force varying as the distance; shew that the particle will continually describe the same orbit, and that the time of revolution is independent of the size of the orbit.

13. Assuming the truth of the parallelogram of forces for *magnitude*, prove it also for the direction of the resultant.

14. A, B, C, D are four smooth pegs in a vertical plane, forming a square, AB and CD being horizontal. An endless chain passes round the four, hanging in two festoons, prove that

$$\frac{1}{\sin.\,\theta.\ lot\ cot\frac{\theta}{2}} - \frac{1}{\sin.\,\phi.\ log.\ cot\frac{\phi}{2}} = 2,$$

and

$$\frac{Cot.\,\theta}{log.\ cot.\frac{\theta}{2}} + \frac{Cot.\,\phi}{log.\ cot\frac{\phi}{2}} = \frac{l}{a} - 2.$$

θ and ϕ being the angles which the tangents at A and C make with the vertical, l the length of the string and a a side of the square.

B.A. HONOURS EXAMINATION IN MATHEMATICS AND NATUAL PHILOSOPHY.

RIGID DYNAMICS.

Examiners, ... { Rev. Principal Adams, M.A., D.C.L.
Henry T. Bovey, M.A., M. Inst. C.E.

1. Enunciate D'Alembert's principle, and shew that it is included in Newton's laws of motion. Apply it to find the equations of motion of a system of rigid bodies.

A rod A B, of length $2a$, is capable of turning in a vertical plane round its centre O which is fixed. The end A is connected by two elastic strings of equal natural length to two points C, D, vertically above and below O and O C = O D = a. The rod is disturbed from its position of equilibrium the strings remaining stretched through the motion, find the angular velocity in any position, and shew that the time of a small oscillation is

$$\pi \sqrt{\frac{2\sqrt{2}}{3}\frac{m\ a}{E}},$$

m being the mass of the rod, and E the coeff. of elasticity of the string.

2. A square board of mass m is rotating freely about one diagonal with angular velocity ω. The end of the other diagonal is suddenly fixed. Determine the subsequent motion.

3. Two strings A C, B C attached to points A and B in the same horizonal, carry a weight W at C. If B C be cut shew that the tension in A C is instantaneously altered in the ratio of sin A sin C.. cos B.

4. State and prove the proposition of Vis Viva.

The charge of powder for a 27-ton gun is 300-lbs.; the projectile weight 500-lbs, its diar. is 10-ins., and its radius of gyration 3.535-ins., the gun is rifled so that the projectile makes 1 turn in 40 calibres; the muzzle velocity is 2020-ft.; find in ft. lbs. the energy of 1-lb. of the powder.

5. A straight tube revolves horizontally about its end which is fixed, and a ball of equal weight with the rod moves along it by its centrifugal force; both ball and tube move freely without the action of any external force; find the velocity of each in any position.

6. In the following cases—(a) is the vis-viva constant; (b) does the force function contain any unknown forces? (c) are there any axes about which areas may be conserved?—:—

a. The earth revolving and contracting through loss of heat.

b. The earth affected by the eruption of volcanoes or the elevation of land above sea.

c. Two particles mutually attracting each other, and themselves attracted to a fixed centre of force.

d. As in c, but with two fixed centres of force.

e. A rod constrained to move on a smooth curve and attracted to a fixed centre of force.

7. A homogeneous circular disc of radius r and mass m rolls without slipping down a rough plane inclined at and to the horizon; determine the motion.

8. A rod is subjected to the action of a number of impressed forces, investigate its tendency to break at any point.

9. Investigate Euler's equations for the motion of a rigid body about a fixed point.

If there are no impressed forces, shew that the motion may be represented by supposing the momental ellipsoid to roll on a certain fixed plane with its centre fixed.

10. Prove the principle of the conservation of angular momentum.

B.A. HONOUR EXAMINATIONS IN MATHEMATICS AND NATURAL PHILOSOPHY.

SURFACES

WEDNESDAY, 27TH APRIL, 1887:—MORNING, 9 A.M.

Examiners,..... { REV. PRINCIPAL ADAMS, M.A., D.C.L.
HENRY T. BOVEY, M.A., M. INST. C.E.

1. If θ is the angle between the two lines (l, m, n) and (l^1, m^1, η^1), shew that $\sin^2\Theta = (m\,n^1 - m^1\,n)^2 + (n\,l^1 - n^1\,l)^2 + (l\,m^1 - l^1\,m)^2$

If $l\,m\,n = 1$, shew that the sum of the angles between the three straight lines, $x = 0, y = n\,z$; $p = 0, z = l\,x$; $z = 0, x = m\,y$—, is two right angles.

2. Prove that the intersection of the surface $xy + y\,z + zx = 0$ with the plane $x + y + z = 0$ is a circle.

3. Determine the nature of the central surface,

$$x^2 + 2\,y^2 + 3\,z^2 - 5\,x\,z = 7$$

4. Three tangent planes to a conicoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$ intersect at right angles, find the locus of the point of intersection.

5. Find the axes of the section of the conicoid $ax^2 + b\,y^2 + c\,z^2 = 1$ by the plane $lx + my + n\,z = 0$, and shew that the area of the section

$$= \frac{\pi\,a - b\,c}{\sqrt{a^2\,l^2 + b^2\,m^2 + c^2\,n^2}}.$$

6. Find the equation of an hyperboloid of one sheet, and shew that it has an asymptotic surface. What is the locus of a point which is equidistant from two fixed lines which, (1) do not intersect, (2) do intersect.

7. Find the equation to the tangent plane at any point of a surface $F(x\,y\,z) = 0$, and hence deduce the condition that the surface shall be cylindrical.

If a tangent plane touch a surface along a line, prove that along that line $\frac{d^2\,z}{d\,x^2}\,\frac{d^2\,z}{d\,y^2} = \left(\frac{d^2\,z}{dx\,dy}\right)^2$.

8. Find the condition that the curve $\varphi\,(x, y, z) \quad 0$ and $F(x, y, z) = 0$, may be plane.

9. Explain what is meant by the umbilci of a quadric, and find the umbilici of an ellipsoid.

10. Determine the osculating plane at any point of a curve and shew that it is perpendicular to the line of intersection of consecutive normal planes.

11. Define fully the meaning of the term, developable surface, and shew that its differential equation is $r\,t - s^2 = 0$.

Find the developable surface of which the helix is the edge.

12. Find the radius of absolute curvature, ρ, at any point of a curve.

Define the radius of spherical curvature, R, and shew that $\rho = R \sin \phi$, where ϕ is their inclination to each other.

Find the radii of curvature and torsion of a helix.

13. Shew how to deduce the general functional equation of conical surfaces.

B. A. HONOURS IN MATHEMATICS AND NATURAL PHILOSOPHY, 1887.

EXPERIMENTAL PHYSICS.

MONDAY, APRIL 18TH;—AFTERNOON, 2.30 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. A tangent galvanometer, a Wheatstone's rheostat and a Daniell's cell were joined up in simple circuit, and by adjusting the resistance a deflection of 45° was obtained. On introducing 30 more turns of the rheostat wire, the deflection was reduced to 40°. A Grove's cell was then substituted for the Daniell, and the resistance adjusted till the deflection was 45°; 50 turns of the rheostat wire were introduced to reduce the deflection to 40°. Compare the electromotive forces of the two cells. Investigate the formula.

2. Describe a box of resistance of coils with a "Wheatstone's bridge" attached. Explain the mode of using it for measuring resistances, and prove the formula employed.

3. A bar magnet placed at right angles to the magnetic meridian acts on a small magnetic needle free to move in a horizontal plane, the length of which is in a line with the middle point of a bar magnet; the distance of the two is great compared with the dimensions of the bar magnet. Prove that the total action of the latter on the former is inversely as the cube of the distance between the nearest poles of the two magnets.

4. In electrostatics define unit of quantity, electrical density, capacity. Prove that if Q be the charge, the electrical density at any point x, y, z, of a charged ellipsoidal conductor is

$$\frac{Q}{\left(4\pi abc\sqrt{\frac{x^2}{a^4}+\frac{y^2}{b^4}+\frac{z^2}{c^4}}\right)}.$$

5. The electrical force just outside a charged conductor at a point whose density is ρ is $4 \pi \rho$.

6. Describe Sir Wm. Thomson's absolute electrometer. If V and V_1, be the potentials of the two plates, S the area of the disc., F the force required to balance a certain attraction, and (d) the distance of the plates then

$$F = \frac{(V - V_1)^2 S}{8 \pi d^2}$$

7. Account for and prove the laws of refraction on the wave theory of light.

8. Homogeneous light diverging from two small holes close together is received on a screen whose plane is parallel to the line joining the holes, investigate a formula for determining the positions of the bright and dark bands.

9. State and account for the phenomena produced by gratings. Why is the spectrum produced by a grating called the *normal spectrum*.

10. Describe Haidinger's experiment by which polarized lights may be recognized by the naked eye, and give Jamin's explanation of it.

11. Show that an elliptic vibration of a particle of the ether may be regarded as the resultant of two rectilinear vibrations at right angles to each other. What use is made of this principle in the theory of light?

12. State the laws of *interference of polarized light*.

FIRST YEAR.

ENGLISH LITERATURE AND ANALYSIS.

THURSDAY, APRIL 7TH :—MORNING, 9 TO 12-30.

Examiners, ... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, B.A.

A.

1. What general features of importance are seen in the poetry of th Elizabethan period?

2. How did the Restoration affect English Literature?

3. Mention the chief writers in Anglo-Saxon and Latin during the Anglo Saxon period, and state, when possible, the places with which they may b connected.

4. What did Alfred say about the state of learning in his day? Wh helped him to revive literature?

5. Tell what you know about the development of the Arthur Sag before Malory?

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6. Make a few notes on the battle of Maldon, and also on the poem which describes it.

7. What do you know of Dares and Dictys, and of their place in literature?

8. Where are remnants of an Anglo-Saxon Physiologus found? Describe them, and say to what class of literature they may be considered to belong.

B.

Analyse :—

1. What hath quenched them hath given me fire.

2. As easy mayst thou the intrenchant air with thy keen sword impress as make me bleed.

3. If it be objected that this doth in a sort authorize usury, which before was in some places but permissive, the answer is that it is better to mitigate usury by declaration than to suffer it to rage by connivance.

4. .....Yet a little ere it fled
Did he resign his high and holy soul
To images of the majestic past,
That paused within his passive being now,
Like winds that bear sweet music, when they breathe
Through some dim latticed chamber.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE.

SPALDING :

Elizabethan and Stuart Periods.

THURSDAY, APRIL 7TH :—MORNING, 9 TO 12.

Examiners,..... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, B.A.

1. To what impulses may be ascribed the development of dramatic literature in the latter part of the reign of Elizabeth?

2. What were the immediate and proximate effects of the commonwealth and Protectorate upon the literature of England?

3. State what you know of the English revisions of the Scripture that appeared after 1550.

4. Who were Jeremy Taylor, Hobbes, Sidney, Cowley, Sir Thomas Browne, Drayton? What are the principal works of each writer? State any opinions, theological, political, metaphysical, or literary, with which the name of any of these is associated?

5. Give the names of four dramatic poets contemporary with Shakspere, and characterise the work and style of each one, giving also the names of his best-known plays.

6. Ascribe each of the following works to its author, and describe the scope and purpose of the work; the Compleat Angler, Hudibras, Annus Mirabilis, History of the Great Rebellion.

7. Shew clearly how in all the departments of literature the influence of France prevailed in the last quarter of the seventeenth century. Give the causes of this.

8. Into what classes do you divide the work of John Milton, and what work may be taken as representative of each class?

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE.

THURSDAY, APRIL 7TH:—MORNING, 9 TO 12.

Examiner,..... CHAS. E. MOYSE, B.A.

1. Notice in general terms the leading features of each main period of English Literature previous to the time of Bacon.

2. Tell what you know of Selden.

3. With what work of Dryden may the Dunciad be compared? Tell what you know of the Dunciad and its two heroes.

4. Notice Addison's Account of the Greatest English Poets and his Campaign, and mention in order some of Cowley's works.

5. Give a brief account of Gay.

6. What do you know about Cooper's Hill and the Rape of the Lock?

7. Why are the following dates worthy of note: 1597, 1608, 1623, 1667, 1688, 1711?

INTERMEDIATE EXAMINATION.

BRITISH HISTORY.

THURSDAY, APRIL 7TH:—AFTERNOON, 4 TO 5.30.

Examiners,..... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, B.A.

A.

1. Give the names of the great constitutional measures from 1215 to 1628 inclusive, and state in distinct outline the leading provisions of each.

2. Trace briefly the rise and development of the political parties known as "Conservative" and "Liberal," respectively.

3. Who were Dunstan, Wycliffe, Sir Thomas More, Lauderdale, Fox, Palmerston ?

B.

1. Give a brief outline of the reign of Richard the Second.
2. Say briefly, but pointedly, what caused the Trial of (*a*) the Seven Bishops (*b*) Warren Hastings.
3. Make a few notes on life in Britain in the time of the Stuarts.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE.

Shakspere; *Tempest*.

THURSDAY, APRIL 7TH:—AFTERNOON, 2 TO 4.

Examiners,..... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, B.A.

1. What is meant by (*a*) Mystery plays, (*b*) Interludes, (*c*) Masks ?
2. On what general grounds may it be held that *The Tempest* was one of the latest of Shakspere's plays ?
3. Trace the character of Ariel and of Caliban, contrasting them with one another and illustrating by apposite quotation.
4. Attribute each of the following citations to the character in whose part it occurs, and tell on what occasion the words are spoken:
   (*a*) The wills above be done! but I would fain die a dry death!
   (*b*).....O, a cherubin,
   Thou was't that did preserve me
   (*c*).....Most sure, the goddess
   On whom these airs attend.
   (*d*) They'll take suggestion as a cat laps milk.
   (*e*) Were I in England now, as once I was
   (*f*) I'll seek him deeper than e'er plummet sounded
   (*g*).....If this prove
   A vision of the island, one dear son
   Shall I twice lose.
5. Make explanatary notes on the following:—
   (*a*) Not so much *perdition* as an hair.
   (*b*) From the *still-vexed Bermoothes*.
   (*c*) Here's a maze trod indeed through *forthrights* and *meanders*.
   (*d*) Had I *plantation* of this isle.
   (*e*) Dashing against the *welkin's* cheek.
   (*f*) My *bosky* acres.
   (*g*) .....more *pinch-spotted* make them.
   Than *pard* or *cat o'mountain*.
   (*h*) O, *Setebos*, these be brave spirits indeed.

6. Give the general outline of Gouzalo's plan for an ideal commonwealth. Is this original with Shakspere? What is Gouzalo's object in framing the scheme?

7. What is meant by the term Action as applied to a play, and how does this explanation affect opinion in regard to *The Tempest?*

8. Write the events in the play from the entrance of Iris to the passage when Prospero says :—"I had forgot the foul conspiracy," etc., giving quotations acccording to your judgment.

THIRD YEAR—CHAUCER AND RHETORIC.

THURSDAY, APRIL 7TH :—AFTERNOON, 2 to 5.30.

Examiners,..... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, B.A.

1. Scan the following lines, and refer each to its place in the Prologue :

A

(*a*) But *sore* wepte she if *oon* of *hem* were deed
(*b*) Gynglen in a whistlyng wind as cleere
(*c*) And whiche they weren and of what degre
(*d*) And in a glass he hadde pigges bones
(*e*) For he hadde *geten* him yet no benefyce
(*f*) He was a shepherd and no mercenarie
(*g*) Ful big he was of *braun* and *eek* of boones
(*h*) He *sleep* no more than doth a *nightyngale*

Comment on the words in italics.

2. Touch on the amusements and sports of Chaucer's day and refer to the Prologue when you can.

3. Give the meaning (and nothing else) of the following:—tendre croppes ; evene lengthe ; gan preye ; at a rennying ; a good mester ; he scholde y-punysscheed be ; al here reed ; al of the newe get ; cosyn to the dede ; herkneth for the beste.

4. Describe any number of the Clerical group, and notice any allusions or interesting words that you meet with.

(B)

RHETORIC.

1. What are the Figures of Similarity ? Illustrate each one by quotation if you can ; and give the general rules for the employment of these figures when they all addressed (*a*) to the Understanding (*b*) to the Feelings.

2. What is the exact distinction between Clearness and Precision as applied to Style? Give an illustration.

3. What qualities lead to a general Harmony of style?

4. State clearly the difference given in your text book, between Loose Structure and Periodic Structure. Give an example of each. Which structure is said to be preferable?

5. How are Arguments divided in Rhetoric?

B.A. ORDINARY EXAMINATION.

EUROPEAN HISTORY: FREEMAN AND BRYCE.

THURSDAY, APRIL 7TH:—AFTERNOON, 2 TO 4.

Examiner,.....CHAS. E. MOYSE, B.A.

[Answer questions 3, 5, 12 and 13. Of the remainder choose any *three*.]

1. Give an account of the Peloponnesian War.

2. Sketch the career of Julius Cæsar.

3. What do you know about the Iconoclastic Controversy?

4. Make historical notes on Ravenna, Arles, Florence and Milan.

5. Point out the character of the De Monarchia.

6. What do you know about Lewis IX as a Crusader? Examine the claim of Edward III. to the French crown.

7. Give an account of the reign of Peter the Great and Catherine II.

8. How did England acquire her possessions in France? Notice the prominent features of the Hundred Years' War.

9. What was the object of the League of Cambray? Mention famous alliances in European History since 1550.

10. Notice the chief points of the Moslem creed. Mention the Caliphates in order of establishment, and without detail, the leading events of Arab conquest.

11. State in the form of a summary the important historical changes which took place in the time of the Franconian Emperors.

12. What were the effects of the Reformation upon the Empire?

13. Sketch to its conclusion the first part of the struggle about the Investitures.

14. Give an account of the Crusade of 1204.

15. Assign events to the following dates: 1032 1071 1096, 1183, 1187, 1212, 1261, 1291, 1356, 1453.

EXAMINATIONS FOR HONOURS IN ENGL'H AND HISTORY.

THIRD YEAR.

Burke; *Reflections on the French Revolution;* Leslie Stephen; *English Thought in the Eighteenth Century,* Vol. II., Cap. X., sections v-x.

FRIDAY, APRIL 1ST:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Explain the following extracts: The wild gas, the fixed air: the then Earl of Holland; with the lamp-post for its second; entering into Onondaga; I admit that we, too, have had writers of that description who made some noise in their day. At present they repose in lasting oblivion; the academies of the Palais Royal; Duke d'Aiguillon; the Orsini and Vitelli.

2. Name the subjects of the sections of Part II. (The Policy of the National Assembly criticized), and give an outline of any two of them.

3. "All Whiggism is detestable because it implies simply the negation of all principles. The first Whig was the devil." Whose views are these, and how are they criticized?

4. What is said of Josiah Tucker?

5. Express briefly and clearly, important opinions on the Colonial Question and connect each with its advocate.

6. In what way are Priestley's intellect and political views spoken of?

7. Give some account of the Federalist.

8. What do you know concerning Montesquieu's "Esprit des Lois?"

HONOURS IN ENGLISH LITERATURE AND HISTORY.

THIRD YEAR.

Milton: *Life; Shorter English Poems;* Areopagitica.

MONDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Sketch Milton's life previous to his going to Horton, and mention English poems as you proceed.

2. Indicate the character of the poems you have mentioned, and quote when you can, in proof of your statements.

3. Show how the design of Comus preserves unity of idea.

4. Quote or give the substance of the non-pastoral portions of Lycidas. Criticise Johnson's criticism of the poem *or* compare Lycidas with Adonais, and In Memoriam.

5. Point out contrasts of minor thought in L'Allegro and Il Penseroso. What is your general impression of the poems?

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6. Say where the following lines occur, and give their contexts when you can:

(*a*) Less than half we find exprest
(*b*) With cowslips wan that hang the pensive head
(*c*) Trip no more in twilight ranks
(*d*) Or call up him that left half told
(*e*) Hide me from day's garish eye
(*f*) Thy rapt soul sitting in thine eyes
(*g*) The Cynosure of neighboring eyes
(*h*) For who would rob a hermit of his weeds?
(*i*) Stole under seas to meet his Arethuse
(*j*) Scylla wept

7. Explain the whole of this passage fully, and with care:

Then listen
To the celestial Sirens' harmony
That sit upon the nine enfolded spheres
And sing to those that hold the vital shears
And turn the adamantine spindle round,
On which the fate of gods and men is wound.
Such sweet compulsion doth in music lie,
To lull the daughters of Necessity,
And keep unsteady Nature to her law,
And the low world in measured motion draw
After the heavenly tune, which none can hear
Of human mould with gross unpurged ear.

8. Compare the Areopagitica with the writing from which it takes its name.

9. Give the main divisions of the Areopagitica, and enter into detail concerning the argument of one of them.

10. Arrange *important* allusions made in the Areopagitica in tabular form under the heads of (*a*) History, Sacred and Secular, (*b*) Mythology, (*c*) Literature,

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HONOURS IN ENGLISH LITERATURE AMD HISTORY.

THIRD YEAR.

ANGLO-SAXON.

SATURDAY, APRIL 9TH:—MORNING, 9 A.M.

Examiner.....CHAS. E. MOYSE, A.B.

1. Cynewulf and Cyneheard, line 25 to end.

(*a*) Decline thegn, byrig, londes, rices, banan, gatu. (*b*) Give the principal parts of the strong verbs.

2. Gregory's Pastoral Care, line 81 to end.

(*b*) Make notes on biscepstole, æstel, thonc, ealneg, buton.

3. Onthere and Wulfstan lines 33-36; 42-45; 58-62; 156 to end.
(*c*) Parse ac...geseah (lines 35 and 36).
4. Alfred's Orosius, line 99 to end.
(*d*) Comment on frith, sibb, middangearde.
5. Anglo-Saxon Chronicle. The battle of Ashdown, line 32 to end.
(*e*) Parse be suthan Temese, thæ geares, ofslægene, thy geare, West-seaxe. Give the principal parts of the strong verbs.

B.

1. Decline halig and compare heah and neah. Conjugate bindan and folgian. Give the meanings of the prefixes be, ge, or, to.
2. State what you know about the use of the Subjunctive in Anglo-Saxon.

C.

Translate: Scortlice ic hæbbe nu gesæd ymb tha thrie dælas ealles thises middangeardes; ac ic wille nu, swa ic ær gehet, thara threora landrica gemære gereccan hu hie mid hiera wætrum tolicgeath.

Æfter thæm Himelco, Cartaina cyning, gefor mid firde an Siciliæ, ond him thær becom swa færlic yfel thæt tha men wæron swa rathe deade swa hit him an becom, thæt hie tha æt nihstan hie bebyrgean ne mehton. Ond he for thæm ege his unwillum thonan wende, ond ham for mid tham the hær to lafe wæron.

EXAMINATION FOR HONOURS IN ENGLISH LITERATURE AND HISTORY.

THIRD YEAR.

Dryden—*Annus Mirabilis; Absalom and Achitophel, part I.; Preface to Fables.*

MONDAY, APRIL 11TH:—MORNING, 9.

Examiner,.....CHAS. E. MOYSE, B.A

1. Mention in order, without any detail whatever, the events described in the Annus Mirabilis.
2. Comment on the following lines, and say in what portion of the poem each occurs:
(*a*) Who first bewitched our eyes with Guinea gold
(*b*) He first was killed who first to battle went
(*c*) To Philip's manes did an offering bring
(*d*) Though made immortal by a poet's song
(*e*) Straight flies at check and clips it down the wind
(*f*) Let Munster's prelate ever be accurst
(*g*) Such vapours once did fiery Cacus hide

3. In what way, and where, does Dryden allude to Ceylon, Tiber, the Sirens, Patroclus, Xenophon, Nilus, Vulcan, the pole star? Notice the meanings of *squander, decently, imps, instructed, blind, expires, dared, letted, gross, fume.*

4. Write a short criticism of the Annus Mirabilis, and quote as you proceed.

5. What is the date of Absalom and Achitophel? Mention leading remarks in Dryden's prefatory Letter.

6. Describe *two* of the following characters: Zimri, Corah, Amiel.

7. Quote lines containing definite historical allusions of general or personal bearing. (Twelve will be sufficient, and no two are to be taken from the same character.)

8. Write a short criticism of Absalom and Achitophel.

9. "All his pilgrims are severally distinguished from each other;" in what strain does Dryden continue?

10. What does Dryden think of *Palamon and Arcite*, and how does he defend himself against Milbourne and Collier?

HONOURS IN ENGLISH LITERATURE.

THIRD YEAR.

Early English:— *Morris and Skeat's Specimens.*

TUESDAY, APRIL 12TH, 1887:—MORNING, 9 TO 12.

Examiners,..... { CHAS. E. MOYSE, B.A.
PAUL T. LAFLEUR, B.A.

1. Translate:—
   (*a*) Robert of Gloucester's Chronicle, ll. 350-389.
   (*b*) Metrical English Psalter, Ps. xvii., ll. 85-104.
   (*c*) The Proverbs of Hendyng, stanzas 23, 25 and 29.
   (*d*) William of Shoreham, De Baptismo, stanzas 5 and 6.
   (*e*) Dan Michael of Northgate, ll. 24-38.
   " " " , ll. 151-160.

2. In the extracts for translation, make short explanatory notes upon the following:—
   (*a*) ek, nuste, bileuede, withsegge, suththe.
   (*b*) unwemmed, onfanged, tobreddest.
   (*c*) ahte, bue, uufeyn.
   (*d*) kendeliche, wyse, te-tealte.
   (*e*) norzothe, acseth, thane.

3. To what dialect does each of the extracts in (I) belong? Prove your statement by citing test words.

4. Shew the intimate connection, grammatical and etymological, between Anglo-Saxon and the early English of these extracts.

HONOURS IN ENGLISH LITERATURE AND HISTORY.

THIRD YEAR.

Hallam:—*Middle Ages; Caps.* 1, 3, 5.

THURSDAY, APRIL 14TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Mention the events that lead up directly to the donation of Pepin?

2. Hallam says of the Normans: "They adopted an uniform plan of warfare both in France and England." Explain.

3. To whom was Languedoc subject? Mention, without detail, noteworthy and unconnected events that occurred there.

4. To what is the decline of the Christian establishment in the East ascribed by William of Tyre? State Hallam's view.

5. Give the dates and notice the provisions of the treaties of Bretigny and Troyes.

6. How did Charles VII. induce the Scots to become his allies? Briefly sketch his character.

7. What do you know about the Catapanus? Give the etymology of the term.

8. Who held the Diet at Roncaglia, and why is it famous?

9. Account for the stubborn defence made by mediæval cities, and give instances.

10. Sketch the history of Pisa before the battle of Meloria, and say when and between whom that battle took place.

11. Mention the four leading houses of Genoa, and say to which of the two great parties each belonged.

12. "The cry of seignior was greater than before; while others cried out let him be duke." Mention the person referred to, and describe the incident.

13. When was the de Medici family at the height of its power? Hallam says of Lorenzo de'Medici: "He completed that subversion of the Florentine republic, which his two immediate ancestors had so well prepared." Explain both references.

14. Say when and why the league of the Rhine was formed.

15. Mention the emperors of the Franconian line and, opposite the name of each, note an event which took place in his reign.

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16. "But, self-taught, he became one of the greatest captains who had "appeared hitherto in Europe. It renders his exploits more marvellous, "that he was totally deprived of sight." To whom is reference made? Give a few details concerning him.

17. What regent of Hungary was conspicuous in the wars against the Turks? Mention "the last, and the most splendid service" rendered by him.

18. What was *prætaxation?*

HONOURS IN ENGLISH LITERATURE AND HISTORY.

THIRD YEAR.

Bryce:—*Holy Roman Empire.* Macaulay, vol. I., cap. I.

SATURDAY, APRIL 16TH:—MORNING, 9 TO 12.30.

Examiner,.....CHAS. E. MOYSE, B.A.

A. 1. "The edict of Caracalla left only two nations still cherishing a national feeling." What was the edict, and which were the nations? Was the influence of speculative philosophy favourable to the edict or not? Illustrate.

2. "By degrees barbarian mercenaries came to form the largest, or at least the most effective, part of the Roman armies." Justify the quotation.

3. To speak of an Eastern and a Western Empire in the Middle Ages is in strictness incorrect. Why?

4. Give three specimens of the way in which the necessity and divine right of the Empire are proved out of the Bible.

5. Mention matters strictly relative to the Concordat of Worms.

6. With what object did Rome send a deputation to Frederick Barbarossa, and how did he receive it?

7. How did Denmark and Venice regard the Holy Roman Empire?

8. What were the general results of the policy of Charles IV.?

9. Who had the right of creating kings, and who claimed to share it? Refer the first portion of the question to history. On what analogy was Knighthood constructed?

10. What was Dante's view of the relations of the imperial and papal power? What event renders Dante's arguments untenable?

11. Notice the approach to Rome by way of Monte Mario and the ceremonies at the entrance of an Emperor.

12. Into what great and unavoidable error did the Protestant Reformers fall? Show from their own principles that their action was unjustifiable.

13. When was the Peace of Westphalia concluded? How did it affect the politics of Europe?

14. Give proofs that Napoleon the Great considered himself to be the successor of Karl the Great.

B. 1. What does Macaulay say in regard to

(*a*) Differences between the Saxons of England and the Teutons of the Continent.

(*b*) The power of Elizabeth over the Church.

(*c*) The impeachment of the five members.

HONOURS IN ENGLISH LITERATURE AND HISTORY.

THIRD YEAR.

Wordsworth: *Prelude.*

TUESDAY, APRIL 19TH:—MORNING, 9 TO 12.30.

Examiner, ... CHAS. E. MOYSE, B.A.

1. State, at some length what are *your* impressions of the Prelude.

2. In what connection do the following extracts occur?

(*a*) .....or tell
How that one Frenchman through continued force
Of meditation on the inhuman deeds
Of those who conquered first the Indian Isles
Went single in his ministry across
The Ocean.

(*b*) "Come now, ye golden times"
Said I, forth-pouring on those open sands
A hymn of triumph.

(*c*) He deemed that my pursuits and labours lay
Apart from all that leads to wealth
He cleared a passage for me.

(*d*) Beside the pleasant Mill of Trompington

(*e*) Thy subtle speculations, toils abstruse
Among the schoolmen, and Platonic forms
Of ideal pageantry

(*f*) .....and those carved maniacs at the gates,
Perpetually recumbent.

(*g*) .....had dislodged
The old Lion and usurped his place.

3. Write on these two minor and incidental subjects in the Prelude (*a*) the Grotto of Antiparos, (*b*) Sarum's plain.

4. State Wordsworth's views on: (*a*) Imagination and its value, (*b*) Town as contrasted with Country. [Quote as you proceed.]

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THIRD YEAR.

Spenser, *Faerie Queene*, Bk. I; Sidney, *Apologie for Poetrie*; Chaucer, *Knightes Tale*.

MONDAY, APRIL 25TH :—MORNING, 9.

Examiner,..... CHAS. E. MOYSE, B.A.

1. What does Spenser say of Tasso in his Introductory letter? What happened on the second day of the feast?
2. Mention, in order, the combats in the First book, and reveal personal allegory when necessary.
3. Describe Kirkrapine, Idlenesse and Fidelia.
4. Give the meaning of and comment on, boughtes, esloyne, housling, ramping, sam. Refer two of the foregoing words to the poem.
5. What definition of Poetry does Sidney accept? Give the date of the Apologie.
6. How does Sidney maintain that Plato is a poet?
7. What objection did Plato bring against poets?
8. In what way does Sidney use *a gorgeous Pallace* and *a child at a play*, in argument?
9. "Is it the Liricke that most displeaseth?" Give the substance of Sidney's reply.
10. What is the source of the Knightes Tale?
11. Describe (*a*) the statues of Mars and Venus in their respective temples, (*b*) the Kyng of Inde.
12. Sketch, at moderate length, the course of the Knightes Tale.
13. Give the meaning (and nothing else) of the following words: starf, gruf, strof, party whyte, sparre, seistow, to wedde, purveiaunce, swelte, manye, opye, unset stevene, gery, foynen, breeme, champartye, swymbel in a swough, gleede, schode, outhees, torettz, ynned, fulle of meth, aboughte, testers.

B.A. ADDITIONAL AND HONOUR EXAMINATION.

Spenser, *Faerie Queene*, Bk. I.; Tennyson, *In Memoriam*.

WEDNESDAY, APRIL 20TH :—MORNING, 9.

Examiner,..... CHAS. E. MOYSE, B.A.

1. Write on this remark in Spenser's introductory Letter :—"In which I have followed all the antique poets historical." Why is Xenophon preferred to Plato?
2. What proofs of Spenser's Puritanical leaning would you advance from the First Book?
3. Describe Duessa (Canto II.) and Despair (Canto IX.).

4. Trace the Red Cross Knight through the First Book, and state, when necessary, the allegorical signification of the persons whom he meets.

5. Name the three famous poems In Memoriam of our Literature. With what Italian work is Tennyson's poem compared? Why is the comparison of little moment?

6. Very briefly mention some characteristics which distinguish each of the English poems from the others.

7. Express in few words the belief on which *In Memoriam* rests. How does Tennyson define *In Memoriam* in the course of the poem?

8. Show that its Prologue presents *In Memoriam* in miniature.

9. Notice Tennyson's devices for indicating the progress of *In Memoriam*.

10. Examine *the* crux of *In Memoriam*.

11. Point out the inner and the relative meaning of the topics with which each of the following lines is concerned, and say in what portions of the poem the lines occur:

(*a*) Is faith as vague as all unsweet.
(*b*) Loss is common to the race.
(*c*) That nothing walks with aimless feet.
(*d*) Of comfort clasped in truth revealed.
(*e*) When Lazarus left his channel-cave.
(*f*) From state to state the spirit walks.
(*g*) Calm is the morn without a sound.
(*h*) —Men may rise on stepping-stones,
Of their dead selves to higher things.
(*i*) Another name was on the door.
(*j*) Ring out wild bells to the wild sky.
(*k*) I would the great world grew like thee.
(*l*) And let the ape and tiger die.

Give the contents of six of the preceding extracts.

12. Mention the vision-series which occur in *In Memoriam*, and examine one of them.

13. Quote some passage which you think powerful on *one* of the following subjects: (*a*) doubt, (*b*) social life, (*c*) knowledge.

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B.A. ADDITIONAL EXAMINATION.

Pope: *Essay on Criticism*, *Essay on Man*, Buckle: *History of Civilization*, 4 CAPS.

SATURDAY, APRIL 23RD,—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

A.

1. Why should Homer and Virgil be studied
2. Mention some of the causes which hinder true judgment, and examine one of them.
3. Mention the critics of whom Pope speaks (Part III.), and when he uses a distinguishing epithet, give it.
4. Notice the meanings which Pope attaches to the word *wit*, and illustrate by quotation when you can.

B.

1. Give the dates of the Epistles of the Essay on Man, and state the general subject of each Epistle.
2. State the leading subjects of Epistle III. Examine one of them.
3. What is Pope's conception of God?

C.

1. What is Buckle's notion of History? In what spirit should an historian write?
2. Point out, at moderate length, how the physical features of a country affect national development.
3. Notice the intellectual decay of Spain in the seventeenth century *or* her revival in the eighteenth.
4. Mention, without any detail whatever, similarities and differences between Scotland and Spain.

B.A. ADDITIONAL EXAMINATION.

ANGLO-SAXON.

Sweet's Anglo-Saxon Reader, Extt. IV., VIII., XXI.

MONDAY, APRIL 25TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

A.

Alfred's Orosius.

1. Translate ll. 46-53.
2. Decline æhtum, mannum, horsan. Parse beoth, hæfde, sohte, foth.

B.

Anglo-Saxon Chronicle.

1. Translate ll. 17-28.

2. thæs the (l. 17): explain thæs. Decline Eastengle. Translate: Se wudu is eastlang ond westlang hundtwelftiges mila lang. Decline wudu, and examine the form hundtwelftiges. Give the modernnames of Legaceaster, Exnceaster, Meresig, Cisseceaster.

C.

The Battle of Maldon.

1. Trans. (*a*) 68-78; (*b*) 172-180; (*c*) 237-245.

2. Make a few historical notes on the battle, and explain what is meant by saying that the poem shows the power of the comitatus—feeling.

3. (*a*) Conjugate the past tense (ind. and subj.) of healdan. Decline twegen. (*b*) Waldend—examine other words of similar meaning. Ah—what class of verb? explain the term you use; point out another verb of the same class in this extract. (*c*) Beswicene parse; felda; make a note on the aorm.

D.

1. Comment, with referenee to modern English, on the words folce, gar, gecranc, ord, hleo, bricge.

2. Give the principal parts of the purely strong verbs in the preceding extract.

B.A. HONOURS.

Shakspere: *Love's Labour's Lost; A Midsummers Night's Dream; Hamlst.*

WEDNESDAY, MARCH 30TH:—AFTERNOON, 2 TO 5.

Examiner,..... .....CHAS. E. MOYSE, B.A.

[Only five questions are to be answered. Of these one must be selected from group A., and two from each of the groups B. and C.]

(A.) 1. What evidence does Love's Labour's Lost afford as to Shakspere's learning?

2. Love's Labour's Lost may be termed a play of unreality; examine this statement, and when quotation seems apt, make it.

(B.) 1. What is your general impression in regard to the plot and the style of the Dream?

2. Deal with the Dream on the supposition (*a*) that it is intended to show life without imagination (Henry Morley); (*b*) that its key-note is constancy.

3. Discuss the nature and the behaviour of the Fairies in the Dream, and quote when you think it necessary to do so.

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(C.) 1. Mention important occasions on which Hamlet indulges in (*a*) passion, (*b*) craft, (*c*) moralizing. Select an instance of each, and enter into details.

2. Select from Hamlet words requiring explanation, but let them be such as Older English explains completely and clearly. Say where they occur.

3. Examine the characters of Laertes, Ophelia and Horatio, and as briefly as possible connect with care each leading statement you make with the facts which give rise to it.

B.A. EXAMINATION FOR HONOURS.

More: *Utopia;* Arnold: *Essays in Criticism.*

FRIDAY, APRIL 1ST:—MORNING, 9

Examiner,.....CHAS. E. MOYSE, B.A.

1. Indicate similarities between the Utopia and Plato's Republic.

2. Mention leading questions discussed in the first part of the Utopia, and sketch the arguments which relate to one of them. Show the contemporaneousness of the first part of the Utopia.

3. Where is the story of Atlantis found? Give its outline.

4. Give an account of the College in the New Atlantis, *or* point out the character and some of the leading features of Harrington's Oceana.

5. What impressions of More's scholarship have you formed from reading the Utopia?

6. What is, according to Sainte-Beuve, the first consideration in regard to "a work of art or mind?" How does Matthew Arnold comment on it?

7. In what connection are the following quotations and expressions used: *Maintenir la délicatesse de l'esprit français;* a *tentative malheureuse;* a *sentiment historique fort élevé;* the *brutalité des journaux anglais;* a good editorial.

8. In what does Matthew Arnold think the value of an Academy consists? To what evils might an authoritative Academy lead? Can you point to such evils from your knowledge of the history of Literature?

B.A. EXAMINATION FOR HONOURS.

ANGLO-SAXON.

Béowulf, ll. 1-710.

MONDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

A. 1. Translate:—

a) 4-11; 20-25; 83-85; 159-163; 170-174, 254-261; 277-285; 301-305; 395-398; 445-451; 489-494.

(*b*) 653-691.

2. Give the principal parts of the strong verbs in (*b*), and make any etymological notes which you consider important.

B. (Translation at sight.)

1. Translate:—

Regulus and the Serpent, from Alfred's Orosius.

After thæm Regulus se consul underfeng Cartaina gewinn. Tha he æst thider mid firde farende wæs, tha gewicade he neah anre ie, seo wæs haten Bagrada. Tha com of thæm wætre an nædre, seo wæs ungemetlice micel, ond tha men ealle ofslog the neh thæm wætre coman. Tha gegaderade Regulus ealle tha scyttan the on thæm færelte wæron, thaæt hie mon mid flanum ofercome. Ac thonne hie mon slog oththe sceat, thonne glad hit on thæm scyllum, swelce hit wære smethe isen. The het he mid thæm palistas, mid thæm hie weallas bræcon, thonne hie on fæstenne fuhton, thæt hiere mon mid thæm thwyres on wurpe. Tha wearth hiere mid anum wierpe an ribb forod, thæt hio siththan mægen ne hæfde hie to gescildanne, ac rathe thæs hio wearth ofslagen; for thon hit is nædrena gecynd thæt heora mægen ond hiera fethe bith on heora ribbum, swa otherra creopendra wyrma bith on heora fotum. Tha hio gefylled wæs, he het hie behyldans (*skin*), and tha hyde to Rome bringan, ond hie thær to mærthe athenian, for thon heo wæs hund twelftiges fota lang.

Ælfric's Homilies. Mid-Lent Sunday.

Seo sæ, the se Hælend oferferde getacnath thas andweardan woruld, to thære com Crist and oferferde; thæt is, he com to thisre worulde on menniscnysse, and this lif oferferde; he com to deathe, and of deathe aras; and astah up on ane dune, and thær sæt mid his leorning-cnihtum, forthon the he astah up to heofenum, and thær sitt nutha mid his halgum. Rihtlice is seo sæ withmeten thisre worulde, forthon the heo is hwiltidum smylte and myrige on to rowenne, hwilon eac swithe hreoh and egeful on to beonne. Swa is theos woruld; hwiltidum heo is gesundful and myrige on to wunigenne, hwilon heo is eac swithe styrnlic, and mid mislicum thingum gemenged, swa thæt heo for oft bith swithe unwynsum on to

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eardigenne. Hwilon we beoth hale, hwilon untrume; nu blithe, and eft on micelre unblisse; forthy is this lif, swa swa we ær cwædon, thære sæ withmeten.

B.A. EXAMINATION FOR HONOURS.

Freeman, *Historical Geography of Europe.* Macaulay, Vol. 1, Cap. 3.

MONDAY, APRIL 11TH:—MORNING, 9 TO 1.

Examiner,.....CHAS. E. MOYSE, B.A.

[Select *two* questions from Group *A*; *one* from group *B*; *one* from group *C*].

A.

1. Describe the geographical growth of the Ottoman Power.
2. Trace the fluctuations of European territory held by France from 1204 to the present day.
3. Review the growth and decay of Venetian power.
4. Sketch the development of Portugal and Arragon.

B.

1. What doyou know of the geographical fortunes of the Duchy of Sax-Dony?
2. Sketch the fate of the Spanish Netherlands.
3. Sketch the history of the colonies of France.
4. Notice the leading divisions of Italy in 1815 and her subsequentfor-s tunes.

C.

1. Notice outlying possessions of the House of Austria and their fate.
2. Give an idea of the extent of the Empire of Karl the Great, and sketch the division of 887.
3. Enter into detail concerning the frontier land of Lorraine and Elsass until 1871.

D.

1. What does Macaulay state concerning Agriculture in the Stuart time?
2. Notice his remarks about Bristol and Birmingham.

B.A. EXAMINATION FOR HONOURS.

Villiers: *Rehearsal*, Campbell: *Pleasures of Hope*.

WEDNESDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

1. What do you know of the life of Villiers?
2. What is noteworthy regarding the date of composition, the authorship, and the change of hero in the Rehearsal? In what piece did Bayes take his revenge? Mention some of the Restoration Dramatists and also some of their Plays.
3. What features of the Restoration Drama do you see ridiculed in the Rehearsal? Allude to a few passages that seem to have a distinct literary reference.
4. Discuss the general mechanism of the Rehearsal, avoiding minute detail, and give your opinion of it.
5. How does Campbell regard Science?
6. "Lo! at the couch where infant beauty sleeps."—Give the substance of the mother's address.
7. "Some pleasing page shall charm the solemn hour." What themes are touched on by the poet? Enlarge on one.
8. Compare Campbell with Pope.
9. State what you consider to be the leading characteristics of the Pleasures of Hope, and illustrate by quotation. (One specimen of each will be sufficient).

B.A. EXAMINATION FOR HONOURS.

Tennyson, *Idylls of the King*.

FRIDAY, APRIL 15TH:—MORNING, 9 TO 12.30.

Examiner,.....CHAS. E. MOYSE, B.A.

1. Give some outlines of the literary history of the King Arthur story.
2. What is the allegorical signification of each of the following extracts?
   (*a*) "..... .....the heathen host
   Swarmed overseas.".....
   (*b*) "Sir, there be many rumours on this head." (Sir Bedivere, of Arthur's birth.)
   (*c*) "As I grew greater grew with me." (Bellicent, of Arthur.)
   (*d*) "Clothed in white samite, mystic, wonderful." (Lady of the Lake in Coming of Arthur.)
   (*e*) "Three queens with crowns of gold." (Passing of Arthur.)
   (*f*) "Which was an image of the mighty world"
   (*a*) Who was Bellicent? (*d*) Describe the Lady of the Lake.
   (*f*) Give the substance of Sir Bedivere's last address to the king.

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3. Disclose the allegory of the following extract:

"My name? she said—
Lynette my name; noble; my need, a knight
To combat for my sister, Lyonors,
A lady of high lineage,.....
She lives in Castle Perilous; a river
Runs in three loops about her living-place;
And o'er it are three passings, and three knights
Defend the passings, brethren, and a fourth
And of that four the mightiest, holds her stay'd
In her own castle,".....

What happened at the pavilion at the first of these? Describe the combat.

"Half fell to right and half to left and lay"

Explain.

4. "O never yet had woman such a pair
Of suitors as this maiden:"

Give the substance of Yniol's account.

5. Mention in the form of summary the course of *Lancelot and Elaine*.

6. He dream'd; but Arthur with a hundred spears
Rode far, till o'er the illimitable reed.....
The wide-wing'd sunset of the misty marsh
Glared on a huge machicolated tower."

Relate the sequel.

7. Treat one of the following themes and make brief and opposite quotations from the Idylls as you proceed:—

(*a*) The contrast between the women of the Idylls and of the Princess.
(*b*) The character of Arthur.
(*c*) Tennyson's use of poetic figure.

THIRD YEAR AND B.A. EXAMINATION FOR HONOURS.

Constitutional History, *Lectures*: Freeman, *Growth of the English Constitution*: Hallam, *Middle Ages*, Cap. 9.

SATURDAY, APRIL 16TH:—AFTERNOON, 2.

Examiner,.....CHAS. E. MOYSE, B.A.

A.

1. What do you know concerning the *Decuriones*?

2. Set forth the character and the functions of the Witan.

3. Name the Palatine Earldoms, and mention a few of their note-worthy features.

4. Describe the burdens of Feudalism.

B.

1. With what English assemblies may the Landesgemeinden be compared?

2. "The constitution which was the common heritage of the Teutonic race was a heritage which the Teuton shared with his kinsfolk in Greece and Italy." Illustrate with reference to Greece.

3. "The life and soul of English law has ever been precedent." Justify the statement.

4. Briefly discuss "that form of government which political writers call *bi-cameral*."

5 When did hereditary succession become the rule in practice? How does Freeman treat the subject?

C.

1. "The sole hope for literature depended on the Latin language, and I do not see why that should not have been lost if three circumstances had not conspired to maintain it." What were they? Give some details about one of them.

2. Make a few notes on the Brethren of the White Caps.

3. Where was the bank of St. George established? What do you know about it?

4. "The Italians of the fourteenth century seem to have paid some attention to an art of which.....our forefathers were almost entirely ignorant." To what art is allusion made, and what does Hallam say concerning it?

5. What seem to have been the tenets of the Paulicians? Add a few historical notes concerning that sect.

6. Mention the chief Universities of Europe in the Middle Ages. They "had their own particular departments of excellence":— instance.

B.A. EXAMINATION FOR HONOURS.

Early English, *Morris & Skeat. Part II., Extt. X.-XX.*

WEDNESDAY, APRIL 27TH:—MORNING, 9 TO 12.

Examiner,.....CHAS. E. MOYSE, B.A.

Translate:—

Ext. XII. ll. 145-158.
XIII. ll. 361-374.
XV. ll. 67-79. (V.)
XVI. ll. 189-215.
XVIII. ll. 119-137.

2. What is the meaning of bro:hely, bruttenet, cant, derworthe, folmarde mellying, oftsiss, prouendreres, samen, sondezmon, tarettes, wastor?

3. Give some special forms (say ten) which distinguish the Northern dialect.

MENTAL AND MORAL PHILOSOPHY.

INTERMEDIATE EXAMINATION.

LOGIC.

TUESDAY, 19TH APRIL:—MORNING, 9 to 12.

Examiners,..... { J. CLARK MURRAY, L.L.D.
PAUL T. LAFLEUR, B.A.

1. How are Terms divided: (*a*) in regard to the number of their significates, (*b*) in regard to the manner in which they are expressed? Give examples of each class.

2. What are the Predicables? Explain fully the nature and sub-divisions of any two of them.

3. State in full the rules for Logical Definition, and explain clearly the difference between Definition and Description.

4. What is meant by Conversion, and what are the different methods of Conversion? Illustrate the methods by converting the following propositions:—

All circles are conic sections.
Some traders are not honest.

5. Give the contrary, contradictory, and subaltern of the following propositions:—

Uneasy lies the head that wears a crown.
None but the brave deserve the fair.
Who gives quickly, gives twice.

6. In the following example of reasoning state the mood and figure, after expressing it in syllogistic form:—

"No one can maintain that all persecution is justifiable, who admits that persecution is often ineffective."

7. "In any syllogism one of the premises must be universal." Prove the truth of this canon by employing symbols.

8. What is meant by Reduction? Explain the method which is called Indirect.

9. Explain the following:—Sorites, Fallacia Accidentis, Petitio Principii, Argumentum ad Hominem.

10. Test the validity of the following examples of reasoning:—

(*a*.) "If all men were capable of perfection, some would have attained it; but none having done so, none are capable of it."

(*b*). We ought to believe the Scripture.
Tradition is not Scripture;
Therefore, we ought not to believe tradition."

(*c*). "Testimony is a kind of evidence which is very likely to be false; the evidence on which most men believe that there are Pyramids in Egypt is testimony; therefore the evidence on which most men believe that there are Pyramids in Egypt is very likely to be false."

(*d*). Since the law allows everything which is innocent and avarice is allowed, avarice is innocent."

(*e*). "This book contains seditious doctrines, and these may be dangerous to the State; it should, therefore, be suppressed."

THIRD YEAR ADDITIONAL.

MURRAY'S HANDBOOK OF PSYCHOLOGY.

FRIDAY, 15TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the process by which Perceptions in general are formed.

2. Point out the effect of civilisation on the Perceptions of Taste and on those of Smell respectively.

3. Show that the sense of Touch by itself cannot give us any perception of absolute dimensions.

4. (*a*) Distinguish two classes of Perceptions of Hearing. (*b*) On which of these does the faculty of speech depend? (*c*) Show that it is so dependent.

5. Explain fully one of the Perceptions of Sight, which implies *depth* in space.

6. Show that Abstraction (*a*) is the counterpart of attention, (*b*) is an act of thought or comparison.

7. (*a*) Explain the function of Idealisation in general. (*b*) Sketch its special forms.

8. Distinguish the Arts which address the eye (*a*) from the other Fine Arts, (*b*) from each other.

9. Give either (*a*) a classification of Illusory Cognitions, or (*b*) a psychological explanation of the peculiarities of Dreaming.

10. Discuss the Empirical theory on the notion of Time or on that of Space.

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THIRD YEAR HONOURS.

CICERO'S DE NATURA DEORUM AND HISTORY OF GREEK PHILOSOPHY.

SATURDAY, 23RD APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Sketch the Epicurean Theology as expounded by Velleius, or Cotta's criticism of it, in Book I. of *De Natura Deorum*.

2. State the main points of the Stoical Theology as expounded in Book II, and give an outline of the argument under one of these.

3. State any of Cotta's criticisms in Book III.

4. Explain the allusions in each of the following passages:—

(*a*) Diagoras, qui atheos dictus est, posteaque Theodorus, nonne aperte deorum naturam sustulerunt? Nam Abderites quidem Protagoras, sophistes temporibus illis vel maximus, quum in principio libri sic posuisset, "De diis neque ut sint, neque ut non sint, habeo dicere," Atheniensium jussu urbe atque agro est exterminatus, librique ejus in concione combusti. (I., 23).

(*b*) Ab Euhemero et mortes et sepulturae demonstrantur deorum. (I., 42).

(*c*) Mihi quidem Democritus, vir magnus in primis, cujus fontibus Epicurus hortulos suos irrigavit, nutare videtur in natura deorum. (I., 43)

5. Distinguish the different periods in the development of Greek speculation, as sketched in the Lectures.

6. Give an account of one of the philosophers of the First Period.

7. Distinguish the different schools of the so-called Incomplete Socratics, connecting their teachings with those of Socrates.

8. Sketch the Ethics of Plato or Aristotle or Epicurus or the Stoics.

THIRD YEAR HONOURS.

TUESDAY, 26TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

I. Fraser's *Selections from Berkeley*.

1. Explain (*a*) the doctrine of Abstract Ideas, (*b*) its application to the idea of Matter, in the *Principles of Human Knowledge*.

2. Explain how we learn to perceive distance, or magnitude, or situation, by sight.

3. What does Visual Perception in any case really amount to?

4. Explain the theory of a Divine Visual Language expounded in *Alciphron*.

5. Write a short note on *Siris*.

II. Thomson's *Outline of the Laws of Thought*.

1. (*a*) Distinguish First and Second Intentions. (*b*) With which of these, according to Thomson, has Logic to do? (*c*) Compare his doctrine with that of Mill on the Import of Names.

2. Compare Thomson's doctrine of the Predicables with that of the old Logicians.

3. Give Thomson's Table of Judgments, or distinguish Explicative and Ampliative Judgments.

4. State Thomson's doctrine of Opposition, or any two of the Immediate Inferences which he recognizes in addition to those admitted by the old Logicians.

5. Explain Thomson's reason for rejecting the Fourth Figure, or explain, and illustrate by an example, either Euler's or Hamilton's Notation.

ORDINARY B.A. EXAMINATION.

CALDERWOOD'S HANDBOOK OF MORAL PHILOSOHHY.

TUESDAY, 5TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D

Eplain the sphere of Moral Philosophy, showing its relation to Psychology.

2. Explain the nature of a moral action, distinguishing it from actions which are not moral.

3. Explain the distinction which has been drawn between Perfect and Imperfect Obligations, pointing out three different uses of the distinction.

4. Explain the Utilitarian theory of Obligation, as held by Professor. Bain or Mr. Mill.

5. Explain the Utilitarian theory of Conscience, especially as developed by Professor Bain.

6. Give Calderwood's classification of Impulses to action, pointing out their relative ethical rank.

7. State fully the opposite theories of the Freedom of the Will and Necessitarianism.

8. Distinguish carefully Theism, Atheism, Pantheism, Polytheism.

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ORDINARY B.A. EXAMINATION.

ROGERS' POLITICAL ECONOMY.

TUESDAY, 5TH APRIL: AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain what constitutes Value in the economical sense of the term.
2. Explain the function of Money, and mention some of the substitutes for it.
3. Explain the nature and origin of Capital, and describe its principal applications.
4. Explain how the Wages of labor are determined.
5. Analyse the different factors which go to constitute the Profits of business.
6. Explain the theory of Rent.
7. Describe any two systems of land-tenure.
8. Point out the effects of an inconvertible paper-currency.
9. State Mr. Mill's justification of exceptional Protection.
10. Distinguish Direct and Indirect Taxation, giving an example of each.

B.A. HONOURS.

DESCARTES AND SPINOZA.

SATURDAY, 2ND APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain (*a*) the part which doubt plays in the Method of Descartes, (*b*) the point at which he held that doubt must stop.
2. (*a*) Why does Descartes attach so much importance to a proof of the existence of God? (*b*) What is the criterion of truth which he deduces from this?
3. Give Spinoza's definitions of Substantia, Attributum, Modus, Deus.
4. Explain the proposition:—"Deus est omnium rerum causa immanens non verum transiens" (I., 18).
5. Explain fully, on the general principles of his system, what Spinoza makes of the human mind and body.
6. Distinguish either (*a*) the three kinds of knowledge (*cognitio*), or (*b*) the three kinds of passions (*affectus*).
7. Define Actio, Passio, Bonum, Malum.
8. Sketch in outline the fifth Part of the Ethics.

B.A. ADDITIONAL.

MODERN PHILOSOPHY.

SATURDAY, 9TH APRIL:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Describe the antagonistic tendencies of Realism and Idealism; and distinguish the different periods of their development in modern times, as sketched in the Lectures.

2. Describe the philosophical work of any one of the three:—Francis Bacon, Giordano Bruno, Jacob Boehme.

3. Give a brief outline either (*a*) of the philosophy of Locke, both on its polemical and on its constructive side, or (*b*) of that of Hobbes, both on its psychological and on its ethico-political side.

4. Give some account of any one of the four philosophers:—Gassendi, Condillac, Bonnet, Helvetius.

5. Explain the peculiar developments of Cartesianism under Geulincx and Malebranche respectively.

6. Mention any Idealists in England prior to Berkeley, and sketch Berkeley's own Idealism.

7. Give an outline either of the dogmatic system of Wolff, or of the sceptical speculations of Hume.

B.A. HONOURS.

THE PHILOSOPHY OF KANT.

WEDNESDAY, 13TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

Give a full outline of any one of the three Kritiks.

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B.A. HONOURS.

ARISTOTLE'S NICOMACHEAN ETHICS.

FRIDAY, APRIL 15TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Explain the difference of rank in different ends (*τέλη*), and the corresponding difference in practical sciences. (*b*) What is meant by *ἡ κυριωτάτη και μάλιστα ἀρχιτεκτονικὴ ἐπιστήμη* ?

2. State (*a*) the divisions of the *ψυχή*, (*b*) the classification of Virtues founded on these.

3. Distinguish *προαίρεσις* from *τὸ ἑκούσιον*, *ἐπιθυμία*, *θυμός*, *βούλησις*.

4. Explain fully Aristotle's definition of Virtue, and illustrate the definition by two of his own examples.

5. Distinguish (*a*) a wider and a narrower meaning of *δικαιοσύνη*, (*b*) the two forms of the latter.

6. Define each of the Dianoetic Virtues.

7. Distinguish the three forms of evil that are to be avoided, and their several opposites.

8. State and criticise the opinion of Eudoxus as to *τἀγαθὸν*; and give Aristotle's own doctrine.

B.A. HONOURS.

MILL'S LOGIC.

MONDAY, 18TH APRIL :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. State fully either (*a*) Mill's theory of Reasoning, or (*b*) his doctrine regarding the theorems and the axioms of geometry respectively.

2. Explain (*a*) the Joint Method of Agreement and Difference, or (*b*) the Deductive Method, or (*c*) the three modes of explaining the Laws of Nature.

3. Explain the nature of the evidence either (*a*) for the Law of Universal Causation, or (*b*) for Uniformities of Coexistence.

4. State fully the requisites of a Philosophical Language.

5. State and illustrate Mill's classification of the Fallacies.

6. Distinguish in the Social Science the Chemical or Experimental, the Geometrical or Abstract, the Physical or Concrete Deductive, and the Inverse Deductive or Historical Methods, stating which is preferred by Mill, and the reason for that preference.

B.A. HONOURS.

SPENCER'S FIRST PRINCIPLES.

WEDNESDAY, 20TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Sketch the line of argument by which Spencer reaches the ultimate ideas of Religion and of Science respectively.

2. Explain his definition of Philosophy.

3. Explain what are the primordial, and what the derivative data of Philosophy.

4. (*a*) What is "the sole truth which transcends experience by underlying it?" (*b*) Give an exposition of any one of its necessary deductions

5. Distinguish Simple and Compound Evolution.

6. Explain the Law of Evolution in its complete formula.

B.A. HONOURS.

HURRAY'S OUTLINE OF HAMILTON'S PHILOSOPHY.

THURSDAY, 21ST APRIL:—MORNING, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish Historical or Empirical and Philosophical or Scientific. Knowledge.

2. Explain either the classification of Mental Phenomena, or that of the Faculties of Cognition.

3. Explain fully the general principle of the distinction in the Qualities of Matter, showing its correspondence with the distinction between Sensation and Perception.

4. What is (*a*) Retention or Conservation, as understood by Hamilton, (*b*) his explanation of it?

5. Explain either (*a*) the problem of Nominalism and Conceptualism, or (*b*) that of the *Primum Cognitum*, with Hamilton's solution in either case.

6. State fully the doctrine of the Conditioned.

7. Give either (*a*) the table of the Conditions of Thought, or (*b*) that of Theories of the Causal Judgment.

8. State fully Hamilton's theory of Pleasure and Pain.

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B.A. ADDITIONAL.

LORIMER'S INSTITUTES OF LAW.

SATURDAY, 23RD APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish either (*a*) the Primary and Secondary Sources of Natural Law, or (*b*) the different Schools of Jurisprudence.

2. Explain the Historical Method and its relation to the Philosophical.

3. Show that human nature reveals its own impotence.

4. Explain either (*a*) how man becomes cognisant of the Rule of Life, or (*b*) how he becomes cognisant of Law in general.

5. Discuss the distinction between Perfect and Imperfect Obligations.

6. Explain the relation of Liberty and Equality.

7. Distinguish either (*a*) the Primary and Secondary Sources, or (*b*) the Primary and Secondary Objects, of Positive Law.

8. Give in detail either (*a*) the Secondary Sources, or (*b*) the Secondary Objects, of Positive Law.

B.A. HONOURS.

MAINE'S ANCIENT LAW.

TUESDAY, 26TH APRIL:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the conception of Themis and Themistes in the Homeric poems.

2. Explain (*a*) the effect of Codes on the development of law, (*b*) the agencies by which these are adapted to a progressive society.

3. Note the principal stages in the development of the conception of a Law of Nature from the ancient *Jus Gentium* to Rousseau.

4. What was the jural unit in early society? Illustrate this by the early history either of Testamentary Succession or of Property.

5. Sketch the early history either of Contract or of Criminal Law.

MODERN LANGUAGES.

FIRST YEAR.

FRENCH.

APRIL 15TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL D.

1. Translate into English :—

Cléonte. Monsieur, je n'ai voulu prendre personne pour vous faire une demande que je médite il y a longtemps. Elle me touche assez pour m'en charger moi-même, et, sans autre détour, je vous dirai que l'honneur d'être votre gendre est une faveur glorieuse que je vous prie de m'accorder.

M. Jourdain. Avant que de vous répondre, monsieur, je vous prie de me dire si vous êtes gentilhomme.

Cléonte. Monsieur, la plupart des gens, sur cette question, n'hésitent pas beaucoup ; on tranche le mot aisément. Ce nom ne fait aucun scrupule à prendre, et l'usage aujourd'hui semble en autoriser le vol. Pour moi, je vous l'avoue, j'ai les sentiments, sur cette matière, un peu plus délicats. Je trouve que toute imposture est indigne d'un honnête homme, et qu'il y a de la lâcheté à déguiser ce que le ciel nous a fait naître, à se parer aux yeux du monde d'un titre dérobé, à se vouloir donner pour ce qu'on n'est pas.....et je vous dirai franchement que je ne suis point gentilhomme.

M. Jourdain. Touchez-là, monsieur ; ma fille n'est pas pour vous.

MOLIÈRE, *le Bourgeois gentilhomme*, *Acte III, S. XII.*

2. Translate into English :—

Qui vous a fagoté comme cela ? J'en fais beaucoup de cas. Vous en userez de la façon qu'il vous plaira. Touchez-lui dans la main. Je n'ai que faire du truchement. Nous l'abusons sous ce déguisement.

3. Write in full the *Preterite Anterior*, the *Subjunctive Present* and *Preterite Definite* of : *s'en aller*, *assaillir*, *mourir*, *naître*, *savoir*, *absoudre* and *vivre*.

4. State three rules to form adverbs from adjectives. Give two examples for each rule.

5. When do proper names of towns and cities take the definite article ? Give two examples.

6. Give six nouns which have both genders, and their meaning in either gender.

7. When do proper names take the mark of the plural? Give examples.

8. Translate into French:—*a rainbow, a humming-bird, a poultry-yard, a blank-signature, a towel, a master-key.* Write the plural of those nouns. Give the rules.

9. Translate into English:—un pauvre auteur, un auteur pauvre; un nouveau livre, un livre nouveau, un livre neuf; la dernière année, l'année dernière.

10. Distinguish between *chaque* and *chacun*. Give examples.

11. Translate into French:—

There are in life things to which one must accustom oneself. Whom does this book belong to? The child to whom everything yields is the most unfortunate. One criticises often in others the faults that one has oneself. That gentleman has had a great loss, but his friends have raised funds each according to his means. Neither the one nor the other have finished their lessons. The body perishes, the soul is immortal, yet all our cares are for the former, while we neglect the latter. I am going to see a friend of his. I saw a friend of mine yesterday. My mother is useful to, and beloved by, her family. Did you break your arm? No, I did not break my arm, but I broke my stick. The curfew was introduced in England by William the Conqueror.

INTERMEDIATE EXAMINATION.

FRENCH.

FRIDAY, APRIL 15:—MORNING, 9 TO 12.

Examiners,..... { P. J. DAREY, M.A., B.C.L., LL.D.
REV. PROF. TANNER.

1. Translate into English this first extract, or the next:—

J'ai vu, Seigneur, j'ai vu votre malheureux fils
Traîné par les chevaux que sa main a nourris. (1)
Il veut les rappeler, (2) et sa voix les effraie;
Ils courent. Tout son corps n'est bientôt qu'une plaie.
De nos cris douloureux la plaine retentit.
Leur fougue impétueuse enfin se ralentit:
Ils s'arrêtent, non loin de ces tombeaux antiques
Où des rois ses aïeux sont les froides reliques. (3)
J'y cours en soupirant, et sa garde me suit.
De son généreux sang la trace nous conduit:

Les rochers en sont teints ; les ronces dégouttantes
Portent de ses cheveux les dépouilles sanglantes.
J'arrive, je l'appelle ; et me tendant la main,
Il ouvre un œil mourant, qu'il referme soudain.
" Le ciel, dit-il, m'arrache une innocente vie.
Prends soin après ma mort de la triste Aricie.
Cher ami, si mon père un jour désabusé
Plaint le malheur d'un fils faussement accusé, (4)
Pour apaiser mon sang et mon ombre plaintive,
Dis-lui qu'avec douceur il traite sa captive ; (5)
Qu'il lui rende... " A ce mot ce héros expiré (6)
N'a laissé dans mes bras qu'un corps défiguré :
Triste objet, où des dieux triomphe la colère,
Et que méconnaîtrait l'œil même de son père.

PHÈDRE, Acte V, Scène VI.

2. Who speaks in the above extract? What was he? (1) Why has nourrin an *s* in the above extract? Give the rule fully. (2) Account for two *l's* in *appelle* ten lines lower down, when rappeler has one. (3) Give the prose construction of this verse. (4) Of what was he *faussement accusé*. (5) Who was that captive? Why was she captive? (6) Why is this *héros expiré* criticized by grammarians?

3. Translate this extract or the first :—

Il expire ; et nos Grecs irrités
Ont lavé (1) dans son sang ses infidélités.
Je vous l'avais promis ; et quoique mon courage (2)
Se fît (3) de ce complot une funeste image,
J'ai couru vers le temple, où nos Grecs dispersés
Se sont jusqu'à l'autel dans la foule glissés. (4)
Pyrrhus m'a reconnu, mais sans changer de face :
Il semblait que ma vue excitât (5) son audace ;
Que tous les Grecs, bravés en leur ambassadeur
Dussent (6) de son hymen relever la splendeur.
Enfin, avec transport prenant son diadème,
Sur le front d'Andromaque il l'a posé lui-même :
" Je vous donne, a-t-il dit, ma couronne et ma foi,
Andromaque, règnez sur l'empire et sur moi.

4. Who speaks in the above extract? (1) Why is lavé written in the singular? Give the rule. (2) Is *courage* the proper word? What would be the proper word? (3) (5) (6). Give the reason why those verbs are in that mood and tense. (4) Why has *glissés* an *s*? Give the rule.

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5. Translate into English :

ELIZABETH (*avec désespoir en tombant assise.*)

Et moi !...
Moi, je resterai donc seule dans la nature,
Ignorant jusqu'au lieu de votre sépulture ;
Sans que même à voix basse on ose le nommer ;
Sans avoir, après vous rien que je puisse aimer ;
Non rien, pas un tombeau, pas une froide pierre
Où portant chaque soir mon deuil et ma prière,
Fidèle au rendez-vous, je dise : les voilà !
Quand Dieu voudra de moi, je les rejoindrai là.

C. DELAVIGNE, *Les enfants d'Édouard*, Acte III, Se. IX.

6. What is the subjunctive mood used to express ?

7. Give eight cases when the subjunctive mood should be used.

8. How and with what does the past participle of a reflective verb agree ? Give two examples.

9. What were the four principal causes of the Renaissance littéraire au XVIe siècle ?

10. Give a a short sketch of the life of the following men : Michel Montaigne, Jean Calvin, Pierre Corneille, Jean Racine.

11. In what kind of literature has each of the above authors distinguished himself ? Mention some of their works.

12. Name an author of the XIIth century, one of the XIIIth, one of the XIVth and one of the XVth.

13. Translate into French :

" Every man," said Imlac, " may, by examining his own mind, guess what passes in the minds of others : when you feel that your own gaiety is counterfeit, it may just lead you to suspect that of your companions not to be sincere. Envy is commonly reciprocal. We are long before we are convinced that happiness is never to be found ; and each believes it possessed by others, to keep alive the hope of obtaining it for himself.

14. " That I want nothing," said the prince, " or that I know not what I want, is the cause of my complaint ; if I had any known want. I should have a certain wish ; that wish would excite endeavour, and I should not then repine to see the sun move so slowly towards the western mountains, or lament when the day breaks and sleep will no longer hide me from myself.

JOHNSON, RASSELAS

THIRD YEAR.

FRENCH

WEDNESDAY, APRIL 20TH:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL.D.

1. Traduisez en anglais :—

Félix. Albin, as-tu bien vu la fourbe de Sévère?
As-tu bien vu sa haine, et vois-tu ma misère ?

Albin. Je n'ai vu en lui qu'un rival généreux,
Et ne vois rien en vous qu'un père rigoureux.

Félix. Que tu discernes mal le cœur d'avec la mine!
Dans l'âme il hait Félix, et dédaigne Pauline;
Et s'il l'aima jadis, il estime aujourd'hui
Les restes d'un rival trop indignes de lui.
Il parle en sa faveur, il me prie, il menace,
Il me perdra, dit-il, si je ne lui fais grâce.
Tranchant du généreux, il croit m'épouvanter.
L'artifice est trop lourd pour ne pas l'éventer.
Je sais des gens de cour qu'elle est la politique,
J'en connais mieux que lui la plus fine pratique ;
C'est en vain qu'il tempête et feint d'être en fureur,
Je vois ce qu'il prétend auprès de l'empereur ;
De ce qu'il me demande il m'y ferait un crime ;
Epargnant son rival, je serais sa victime,
Et s'il avait affaire à quelque maladroit,
Le piége est bien tendu, sans doute il le perdrait ;
Mais un vieux courtisan est un peu moins crédule,
Il voit quand on le joue et quand on dissimule,
Et moi j'en ai tant vu de toutes les façons
Qu'à lui-même, au besoin, j'en ferais des leçons.

CORNEILLE, *Polyeucte, Ac. V., Sc. I.*

2. Que pensez-vous du caractère de Félix d'après le morceau ci-dessus? Comparez-le avec celui de Sévère.

3. Traduisez en français :—*Cogery, third French course :*

He regained the threshold where his little sister was standing beside her mother. Although I do not understand French, I guessed something strange had happened. I bought a quire of paper a fortnight ago, and now I can't find a single sheet. Why does he use my name, I have not the slightest knowledge of him ? He has apprenticed his eldest son to a book-binder. He will require a great deal of courage in order to complete that work. The turf is sprinkled with more flowers than a botanist could classify in one day. Look here, my boy, you have put the cart before the horse.

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Traduisez en anglais :—

Allez-vous trouver à redire à cela? De quoi s'avise-t-il? Cela ne le regarde pas. S'il ne me paie pas, je m'en prendrai à son cousin. Il a fait condamner cette porte. Vous serez bientôt sur le pavé si vous n'avez l'œil au guet. Il ne s'entend pas à découper. Elle est allée le voir à mon insu.

4. Nommez dix auteurs appartenant au XVIIIe. siècle, et dites en quel genre de littérature chacun d'eux s'est illustré. Faites connaître quelques-uns de leurs ouvrages.

5. Traduisez en français : —

Pilgrimage, said Imlac, like many other acts of piety, may be reasonable or superstitious according to the principles upon which it is performed. Long journeys in search of truth are not commanded. Truth, such as is necessary to the regulation of life, is always found where it is honestly sought. Change of place is no natural cause of the increase of piety, for it inevitably produces dissipation of mind. Yet, since men go every day to view the fields where great actions have been performed, and return with stronger impressions of the event, curiosity of the same kind may naturally dispose us to view that country whence our religion had its beginning; and I believe no man surveys those awful scenes without some confirmation of holy resolutions.

JOHNSON, *Rasselas, Chap. XI.*

THIRD YEAR ADDITIONAL.

FRENCH.

APRIL 15TH :—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, LL.D.

1. Traduisez en anglais :—

L'oiseleur, l'autour et l'alouette.

Les injustices des pervers
Servent souvent d'excuse aux nôtres.
Telle est la loi de l'univers :
Si tu veux qu'on t'épargne, épargne aussi les autres

Un manant au miroir prenait des oisillons.
Le fantôme brillant attire une allouette :
Aussitôt un autour, planant sur les sillons,
Descend des airs, fond et se jette
Sur celle qui chantait, quoique près du tombeau.
Elle avait évité la perfide machine,
Lorsque se rencontrant sous la main de l'oiseau,
Elle sent son ongle maline.
Pendant qu'à la plumer, l'autour est occupé
Lui-même sous les rets demeure enveloppé :
Oiseleur, laisse-moi, dit-il en son langage ;
Je ne t'ai jamais fait de mal.
L'oiseleur repartit : Ce petit animal
T'en avait-il fait davantage ?

LA FONTAINE, *livre VI., Fable XV.*

2. Que pensez-vous de la morale des Fables de La Fontaine ? Expliquez votre réponse par des exemples.

3. Comment considérez-vous La Fontaine comme écrivain ?

4. Quels sont les deux seuls ouvrages publiés par l'Académie ?

5. Quel est l'ouvrage le plus important qui se produisit sur la langue française au XVIIe siècle ? Qui en est l'auteur ? Comment composa-t-il ce livre ?

6. Ecrivez une courte biographie du Cardinal de Retz et de St. Evremond. Par quels ouvrages sont-ils connus dans le monde littéraire ? Dites ce que vous en pensez.

7. Dites pourquoi Racine composa *Les Plaideurs.*

8. Traduisez en anglais :—

Du repos ? Ah ! sur toi tu veux régler ton père.
Crois-tu qu'un juge n'ait qu'à faire bonne chère,
Qu'à battre le pavé comme un tas de galants,
Courir le bal nuit, et le jour les brelans ?
L'argent ne vient pas si vite que l'on pense.
Chacun de tes rubans me coûte une sentence.
Ma robe vous fait honte : un fils de juge ! Ah, fi !
Tu fais le gentilhomme : bé ! Dandin, mon ami,
Regarde dans ma chambre et dans ma garde-robe
Les portraits des Dandins : tous ont porté la robe :

RACINE, *Les Plaideurs, A.* 1, *sc. IV.*

9. Traduisez en français :—

As the fair happened on the following day, I had intentions of going myself, but my wife persuaded me that I had got a cold, and nothing could prevail upon her to permit from home. "No, my dear," said she "our son Moses is a discreet boy, and can buy and sell to very good advantage. You know our great bargains are of his purchasing. He always stands out and higgles, and actually tires them till he gets a bargain." As I had some opinion of my son's prudence, I was willing enough to intrust him with this commission; and the next morning I perceived his sisters mighty busy in fitting out Moses for the fair.

GOLDSMITH, *The Vicar of Wakefield.*

B. A. ORDINARY EXAMINATION.

FRENCH.

APRIL 20TH:—MORNING, 9 TO 12.

Examiners, ... { P. J. DAREY, M.A., LL.D. / REVD. CHS. TANNER.

1 Traduisez: Polyeucte, Acte III., Scène II.

Pauline.—Tu prépares mon âme à d'étranges ennuis. (1)

Stratonice.—Vous n'en sauriez avoir une plus juste cause.

Pauline.—L'ont-ils assassiné?

Stratonice.—Ce serait peu de chose. Tout votre songe est vrai, (2) Polyeucte n'est plus...

Pauline.—Il est mort?

Stratonice.—Non, il vit; mais ô pleurs superflus!

Ce courage si grand, cette âme si divine,
N'est plus digne du jour, ni digne de Pauline,
Ce n'est plus cet époux si charmant à vos yeux,
C'est l'ennemi commun de l'État et des dieux;
Un méchant, un infâme, un rebelle, un perfide,
Un traître, un scélérat, un lâche, un parricide,
Une peste exécrable à tous les gens de bien,
Un sacrilége impie, en un mot, un chrétien.

Pauline.—Ce mot aurait suffi sans ce torrent d'injures.

Stratonice.—Ces titres (3) aux chrétiens sont-ce des impostures (4)?

Pauline.—Il est ce que tu dis, s'il embrasse leur foi; mais il est mon époux, et tu parles à moi. (5)

Stratonice.—Ne considérez plus que ce Dieu qu'il adore.

Pauline.—Je l'aimerai par devoir ; ce devoir dure encore.
Stratonice.—Il vous donne à présent sujet de le haïr ;
Qui trahit tous nos dieux aurait pu vous trahir.
Pauline.—Je l'aimerais encore, quand il m'aurait trahie ;
Et si de tant d'amour tu peux être ébahie, (6)
Apprends que mon devoir ne depend point du sien
Qu'il y manque, s'il veut ; je dois faire le mien.
Quoi ! s'il aimait ailleurs, serais-je dispensée (7)
A suivre, à son exemple, une ardeur insensée ?
Quelque chrétien qu'il soit, je n'en ai point d'horreur
Je chéris sa personne, et hais son erreur.
Mais quel ressentiment en témoigne mon père ?
Stratonice.—Une secrète rage, un excès de colère
Malgré qui (8) toutefois un reste d'amitié,
Montre pour Polyeucte encore quelque pitié.
Il ne veut point sur lui faire agir sa justice.
Que du traître Néarque il n'ait vu le supplice.

2 (1). Expliquez toute la force de ce mot *ennuis* employé ici. Quelle est sa signification actuelle ?

(2). Qu'est-ce que veut dire Stratonice par ces mots votre *songe est vrai?* A quel songe fait-elle allusion?

(3). Que veut-elle dire par *titres ?* et (4) par *impostures.*

(5). Tu parles *à moi?* Est-ce la construction ordinaire du pronom me employé comme complément indirect ? Qu'elle est la construction ordinaire ? Quand ce pronom doit-il être construit comme il est ici ? Donnez la règle.

(6). Quelle remarque faites-vous sur ce mot *ébahie?*

(7). Que signifie *dispensée à ?* Quel serait le mot propre.

(8). Dirait-on aujourd'hui *malgré* qui. Expliquez votre réponse.

3. Qu'est-ce que représente Pauline dans la tragédie de Polyeucte? Quels étaient ses sentiments envers Sévère ?

4. Donnez un aperçu de la vie de Victor Hugo,
" " " Chateaubriand,
" " " Casimir Delavigne,
" " " Victor Cousin,
" " " Adolphe Monord,
" " " Mme. de Staël.

5. Dites en quel genre de littérature chacun des ces auteurs s'est illustré. Citez quelques-uns de leurs principaux ouvrages.

6. Quels sont les auteurs qui ont écrit : *le Lac ; le Combat de la Sérieuse ; la Mécanique céleste ; le Pamphlet des pamphlets ; les Ruine ou méditations sur les révolutions des empires ; le Meunier sans souci ?*

7. Traduisez en français :

Cogery's Third French Course.

1 We will resume our work this evening ? 2. How many sittings did the painter require to complete your likeness ? 3. We were quickly conformed to the habits of the people with whom we lived. 4. There are not enough plates on the table, three more are wanted. 5. Is he short of money ? here is some he can have. 6. He will require a great deal of courage in order to complete that work. 7. Believe me, when I see a man going from door to door begging his bread, it makes my heart ache. 8. Say what you like, it is very sad. 9. Do as you please, come when you like you will be always welcome. 10. May God always protect those who dwell under that roof.

8. Traduisez en anglais :

1. Quand je vais dans un salon il me semble que j'ai l'air toute gauche. 2. Je ne sais comment m'y prendre. 3. Nous avons été coucher à la belle étoile. 4. On a mis sa tête à prix. 5. Ils sont criblés de dettes ; quand on leur demande de l'argent, ils font la sourde oreille. 6. Au bout du compte, de quoi avez-vous à vous plaindre. 7. Je ne veux aucun profit dans cette affaire, payez-moi mes déboursés. 8. Il y va du bonheur de votre existence, cela demande de la réflexion. 9. Il faudra vous défaire de ces mauvaises habitudes. 10. Allez-vous encore trouver à redire à cela

Traduisez en français :

WARREN HASTINGS.

9. The entire population of the district of Benares took arms. The fields were abandoned by the husbandmen, who thronged to defend their prince. The infection spread to Oude. Even Bahar was ripe for revolt. The hopes of Cheyte Sing began to rise. Instead of imploring mercy in the humble style of a vassal, he began to talk the language of a conqueror. But the English troops were now assembling fast. The officers, and even the private men, regarded the Governor-General with enthusiastic attachment, and flew to his aid with an alacrity which, as he boasted, had never been shown on any other occasion.

10. When he (Warren Hastings) was eight years old, his uncle Howard determined to take charge of him and to give him a liberal education. The boy went up to London, and was sent to a school at Newington, where he was well taught, but ill fed. He always attributed the smallness of his stature to the hard and scanty fare of this seminary. At ten he was removed to Westminster school.

Warren was distinguished among his comrades as an excellent swimmer, boatman and scholar. At fourteen he was first in the examination, for the foundation. His name in gilded letters on the walls of the dormitory still attests his victory over many older competitors.

B.A. ADDITIONAL.

FRENCH.

APRIL 21ST :—MORNING, 9 TO 12.

Examiners, ... { P. J. DAIRY, LL.D. / REV. CHS. TANNER.

1. Quels sont les plus anciens monuments de la langue française ? Donnez la date de ces écrits.

2. Qu est-ce qu'on appelle *cycle breton ?* Faites connaître l'œuvre la plus remarquable qui se rapporte à ce cycle.

3. Qu'est-ce qu'on entend par la langue d'oc et la langue d'oïl ? Pourquoi sont-elles ainsi appelées ?

4. Dites ce que vous savez de *La Croisade des Albigeois.* De quels événements comprend-elle le récit ? Qui fut le chef de cette croisade ?

5. Qu'est-ce qu'on appelle *romans allégoriques ?* Quels sont les deux romans allégoriques les plus remarquables ? Donnez un résumé de l'un d'eux.

6. Qu'est-ce qu'on appelle *chansons de gestes ?* Citez la plus fameuse. Qu'est-ce qui amena la décadence de ces chansons ? Par quoi furent-elles remplacées ?

7. Racontez l'origine du théâtre en France.

8. Donnez un aperçu de la vie et des écrits de chacun des trois chroniqueurs Villehardoin, Joinville, Froissard.

9. Donnez une description de l'hôtel de Rambouillet et les noms de quelques-uns qui s'y donnaient rendez-vous.

10. Nommez et décrivez les quatre espèces d'accents.

11. Traduisez en Anglais :

C'est l'heure où Paris se montre dans toute sa beauté. Pendant la journée, le plâtre des façades fatigue l'œil par sa blancheur monotone, les chariots pesamment chargés font trembler les pavés sous leurs roues colossales, la foule empressée se croise et se heurte, uniquement occupée de ne point manquer l'instant des affaires ; l'aspect de la ville entière a quelque chose d'âpre, d'inquiet et de haletant ; mais dès que les étoiles se lèvent, tout change ; les blanches maisons s'éteignent dans une ombre vaporeuse ; on n'entend plus que le roulement des voitures qui courent à quelques fêtes ; on ne voit que passants flâneurs ou joyeux ; le travail a fait place au loisir. Maintenant chacun respire de cette course ardente à travers les occupations du jour ; ce qui reste de force est donné au plaisir ! Voici les bals qui éclairent leurs péristyles, leurs spectacles qui s'ouvrentt les boutiques de friandises qui se dressent le long des promenades, les crieurs de journaux qui font briller leur lanterne. Paris a décidément déposé la plume, le mètre et le tablier ; après la journée livrée au travail, il veut la soirée pour jouir ; comme les maîtres de Thèbes, il a remis au endemain les affaires sérieuses.

12. Quelle espèce d'ouvrage est le *Philosophe sous les toits?*

Traduisez les expressions suivantes, prises du *Philosophe sous les toits* Des moineaux qui picorent des miettes de pain. Je suis revenu à petits pas savourant à plein cœur les purs souvenirs de cette soirée. Enfin poussé à bout par cet egoïsme brutal. Le gazouillement de la cafetière qui semble causer avec mes chenets. La hutte du sabotier, recouverte de gazon et de copeaux. Le monde est là par échantillons. Les poignantes critiques.

13. A Lawn before the Duke's Palace. Enter Rosalind and Celia.

Cel. I pray thee, Rosalind, sweet my coz, be merry.

Ros. Dear Celia, I show more mirth than I am mistress of; and would you yet I were merrier? Unless you could teach me to forget a banished father, you must not learn me how to remember any extraordinary pleasure.

Cel. Herein, I see, thou lovest me not with the full weight that I love thee. If my uncle, thy banished father, had banished thy uncle, the duke my father, so thou hadst been still with me, I could have taught my love to take thy father for mine; so wouldst thou, if the truth of thy love to me were so righteously tempered as mine is to thee.

14. *Ros.* Well, I will forget the conditions of my estate to rejoice in yours.

Cel. You know my father hath no child but I, nor none is like to have; and, truly, when he dies, thou shalt be his heir; for what he hath taken away from thy father perforce, I will render thee again in affection; by mine honor, I will; and when I break that oath, let me turn monster therefore, my sweet Rose, my dear Rose, be merry.

As you like it, Act I, Se. II.

B.A. HONOURS.

FRENCH.

TUESDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiner,..... P. J. DAREY, LL.D.

1. Faites connaître les caractères d'Alceste, de Célimène et de Philinte dans le *Misanthrope*. Quelles sont les deux meilleures scènes de cette comédie? Faites un résumé de cette pièce.

2. Le rôle d'Emilie dans *Cinna* est-il naturel? Donnez des raisons à l'appui de votre réponse. Que pensez-vous de celui de Cinna? Par quoi est-il inspiré dans ses actions? En quoi le caractère d'Auguste pèche-t-il?

3. Donnez un résumé de la vie de LaRochefoucault. Dites quelle impression produit la lecture des *Maximes*. Combien de temps La Rochefoucault travailla-t-il à cet ouvrage? En quoi consistaient les changements qu'il y faisait? Citez quelques-unes de ses Maximes.

4. Quelles sont les raisons pour lesquelles Montaigne est le plus estimé de tous les écrivains du XVIe siècle? Etait-il beaucoup intéressé dans le puissant mouvement de son siècle? Faites une courte biographie de Montaigne. De quoi traite-t-il dans ses *Essais?*

5. Dans les mots tirés du Latin quels sont les caractères spécifiques pour reconnaître les mots d'origine populaire et les distinguer des mots d'origine savante? Donnez deux exemples.

6. Qu'est-ce que devient la voyelle *atone* qui précède immédiatement la voyelle *tonique* d'un mot qui passe du Latin au Français?

7. Ecrivez en français moderne:

Li baron sont si lié, que il nel pooient croire que ce soit voirs. Et li Venisien comencent à envoier chevaus et parlefroiz à l'ost en bastiaus, de cels que ils avoient gaaigniez dedenz la ville. Et quant l'emperères Alexis vit que ils furent ensi entré dedenz la ville, si comence ses gens à envoier à si grant foison vers els. Et quant cil virent que il ne les porroient soffrir, mistrent le feu entre els et les Grex. Et li vens venoit devers nos genz. Et li feus si comence si grant à naistre, que li Grex ne pooient veoir nos genz. Ensi se retraistrent à lors tors que ils avoient laissies et conquises.

Villehardouin, de la Conquête de Constantinople.

8. Ecrivez en Français, une lettre d'une vingtaine de lignes, aux commissaires des Ecoles de Montréal, pour leur demander une place de maître de langues modernes.

FIRST YEAR.

GERMAN.

THURSDAY, APRIL 21ST:—MORNING, 9 TO 12.

Examiner,.....C. F. A. MARKGRAF, M.A.

1. Translate into English:

(A) Hoch ragt aus ſchatt'gen Gehegen
Ein ſchimmerndes Schloß hervor,
Ich kenne die Thürme, die Zinnen,
Die ſteinerne Brücke, das Thor.

Es schauen vom Wappenschilde
Die Löwen so traulich mich an,
Ich grüße die alten Bekannten
Und eile den Burghof hinan.

Dort liegt die Sphinx am Brunnen,
Dort grünt der Feigenbaum.
Dort hinter diesen Fenstern
Vertraumt' ich den ersten Traum.

Ich tret' in die Burgkapelle
Und suche des Ahnherrn Grab;
Dort ist's, dort hängt vom Pfeiler
Das alte Gewaffen herab.

Noch lesen umflort die Augen
Die Züge der Inschrift nicht,
Wie hell durch die bunten Scheiben
Das Licht darüber auch bricht.

A. von Chamisso, das Schloß Boncourt.

(B) Siehe, da stürmte auf einmal von Osten her ein scharfer, schneidender Wind in die grauen Wolkenmassen, und die Wolken zertheilten sich eilend, so daß der gestirnte Himmel mit allen seinen Lichtern auf die Wanderer hernieder blickte.

„Nun Gott sei gepriesen!" sagte Hermann, „jetzt werden wir den Weg wohl finden."—„Und wie denn, mein Vater?" fragte der Knabe. „Siehst du denn dort nicht den Sirius leuchten? Er stehet in dieser Jahreszeit gerade über unserm Dorfe. Wohlan, wir müssen uns zur Rechten wenden, denn werden wir noch heute die Heimath erreichen." Da staunte Emil und sagte: „Das hatte ich doch nimmer gedacht, daß wir unsern Weg am Himmel finden würden!"

J. H.C. Nonne, die leuchtenden Sterne.

2. (See Ext. A and B.) (*a*) State the cases in the following expressions:—aus schatt'gen Gehegen; vom Wappenschilde; am Brunnen; hinter diesen Fenstern; mit allen seinen Lichtern; in dieser Jahreszeit. Explain vom and am. (*b*) Give the other cases Sing. and the Nom. Plu. of:—ein schimmerndes Schloß; die steinerne Brücke; der gestirnte Himmel; unsern Weg. (*c*) Give the other cases Plu. and all cases Sing. of:—die umflorten Augen (n.).

3. State the classes of nouns belonging to the I. and III. division in the Plural of the ***strong*** declension, and mention *two* nouns of each class in each of the above-named divisions.

4. (See Ext. A and B.) Parse the following verbs, and give their Present Infinitives:—ragt hervor, ſchauen an, liegt, verträumt', bricht, ſtürmte, zertheilten, eilend, geprieſen, werden finden, ſtehet, gedacht.

5. (*a*) Give the 2nd Sing. and Plu., Present Indicative, of:—haben, ſein, werden, können, dürfen, mögen, müſſen, wiſſen, arbeiten. (*b*) Write down the Perfect and Second Future Indic. and the Imperative of:—* verſprechen, * ausgehen, * zurücknehmen, abreiſen.

6. Conjugate „weglegen", giving the 1st Sing. and 3rd Plural of the six tenses of the Indicative.

7. (*a*) When is the Eng. preposition '*to*' expressed by the Dative, and when by a preposition? (*b*) When is '*with*' rendered by „mit" and when by „bei"? Give examples for *a* and *b*.

8. Translate into German:

The rivers of many large countries are very small. We have been nowhere this forenoon. They had put on their hats. These knives are of bright steel, and those forks of good silver. That young lady is my daughter's friend. Shall I go for your books, or will you send for them? He waited a whole hour in the street. I shall (Fut.) take the eight o'clock train in order to reach (the) town at a quarter to ten. His eldest son will (Fut.) stay *for* some months at our parents' house. We like to read of great and wise men.

INTERMEDIATE EXAMINATION.

GERMAN.

THURSDAY, APRIL 21ST:—MORNING, 9 TO 12.

Examiner, ... C. F. A MARKGRAF, M.A.

1. Translate into English:—

(A) In die Welt hinausgeſtoßen
Steht der Menſch verlaſſen da:
Winde brauſen, Wetter toſen,
Nichts iſt ſeinem Herzen nah.
Liebend rufen ihm die Sterne,
Rufen ihm die Blumen zu:
„Sieh nicht traurig in die Ferne,
Uns, o Menſch, gehöreſt du!"

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Und er drückt mit tiefem Sehnen
Erd' und Himmel an sein Herz,
Und in warmen, linden Thränen
öf't die Liebe seinen Schmerz.

Doch der Nord verheert die Auen,
Jedes Blümchen hat sein Grab;
In die Erde, mit Vertrauen,
Steckt er seinen Wanderstab.

Und mit hoffendem Gemüthe
Schaut er auf zum Sternenchor,
Und es bricht die zarte Blüte
Aus dem dürren Holz hervor.

Aloys Schreiber, Der Mensch.

Der eigentliche, ächte Große auf der Erde wäre nur der, der sich gar nichts Böses bewußt wäre; aber dieser Einzige ist längst gekreuzigt; dennoch geben wir Selbstschmeichler diesen Namen den Fürsten und den Genie's.

Jean Paul, Wahre Größe.

C) Wallenstein wußte längst den ganzen Inhalt ihrer Sendung, als die Abgesandten des Kaisers ihm vor die Augen traten. Er hatte Zeit gehabt, sich zu sammeln, und sein Gesicht zeigte Heiterkeit, während daß Schmerz und Wuth in seinem Busen stürmten. Aber er hatte beschlossen zu gehorchen. Dieser Urtheilsspruch überraschte ihn, ehe zu einem kühnen Schritte die Umstände reif und die Anstalten fertig waren. Seine weitläufigen Güter waren in Böhmen und Mähren zerstreut; durch Einziehung derselben konnte der Kaiser ihm den Nerven seiner Macht zerschneiden. Von der Zukunft erwartete er Genugthuung, und in dieser Hoffnung bestärkten ihn die Prophezeiungen eines italienischen Astrologen, der diesen ungebändigten Geist, gleich einem Knaben, am Gängelbande führte. Seni, so hieß er, hatte es in den Sternen gelesen, daß die glänzende Laufbahn seines Herrn noch lange nicht geendigt sei, daß ihm die Zukunft noch ein schimmerndes Glück aufbewahre. Man brauchte die Sterne nicht zu bemühen, um mit Wahrscheinlichkeit vorher zu sagen, daß ein Feind wie Gustav Adolph einen General wie Wallenstein nicht lange entbehrlich lassen würde.

Schiller, Wallenstein's Absetzung.

2. (See Ext. A. B. C.) (*a*) Mensch, Welt, Herz, Schmerz, Blümchen, Grab, Erde, Namen, Fürsten, Kaiser, Knaben, Herrn. Show which of the above-mentioned nouns belong to the *strong*, and which to the *weak* declension, stating the division; and give the other cases Sing. and the Nom. Plu. of:—der Mensch, sein Herz, diesen Namen, seines Herrn. (*b*) Decline in both numbers:—der eigentliche, ächte Große; eines italienischen Astrologen; die zarte Blüte. (*c*) Explain the form „die Abgesandten", and give the 4 cases Singular.

3. (See Ext. A. B. C.) Parse the following vérbr, and give their Present Infinitives :—hinausgeſtoßen, ſieh, bricht hervor, wäre, wußte, traten, hatte beſchloſſen, konnte, erwartete, hieß, aufbewahre, laſſen würde.

4. Illustrate by short examples the declension of *proper* names of persons, countries and places.

5. When do *possessive* pronouns become *definite* words, and how are they declined when definite? Give examples.

6. (*a*) Give the Imperfect Indic. and Subj. (1st pers. Sing.) of:—empfehlen, gewinnen, kennen, werfen, ſenden, ſterben. (*b*) What are *proper* and *improper* reflexive verbs? Write down the Present Indic. (all persons) of ſich freuen and ſich * vornehmen. (*c*) Give the corresponding tenses in the *passive* voice of :—du klagſt an: wir entſchuldigten; ihr habt aufgehalten; ſie werden belohnen.

7. Conjugate * erziehen, giving the 3rd Sing. and 1st Plural of all the moods and tenses *active*.

8. Translate into German :—

The stranger came in just now, but he went out again directly, without *speaking* (to speak) to any one. We will (Fut.) go down to you, if you cannot come up to us. In a month at the latest we hope to receive news from our distant relations. They asked me if I would take the journey by land or by water. He thought you had departed, but he was glad to find you still at home. Read (2nd Sing.) to me what you have written! They met us outside the garden, on the other side of the brook. The plan of the town has been drawn (zeichnen, reg.) by a very clever artist. We crossed that river, although it was covered with ice.

THIRD YEAR.

GERMAN.

THURSDAY, APRIL 21ST :—MORNING, 9 to 12.

Examiner, ... C. F. A. MARKGRAF, M. A.

I. Überſetzen Sie ins Engliſche :—

Aus Lessing's „Minna von Barnhelm" :—

4. Aufzug. 6. Auftritt. Seiten 73–74.

Aus Chamisso's „Peter Schlemihl" :

4. Kapitel. Seiten 26–27.

II. Grammatik.

1. Weiſen Sie mit Beifügung kurzer Beiſpiele die Fälle vor, wo der bestimmte Artikel im Deutſchen und nicht im Engliſchen gebraucht wird.

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2. Welche Präfixe und Suffixe dienen zur Ableitung (*a*) von Substantiven, und (*b*) von Adjektiven.

3. Erwähnen Sie einiger Adjektiven, (*a*) welche den Genitiv, (*b*) welche den Dativ regieren. Gibt es welche, die den Akkusativ regieren?

4. (*a*) Wann gebraucht man im Deutschen das Perfekt des Indikativs? (*b*) In welchen besondern Fällen bedient man sich im Deutschen des ersten Futurs anstatt des englischen Präsens des Indikativs, und des zweiten Futurs statt des englischen Perfektums? —Geben Sie Beispiele für *a* und *b*.

5. Übersetzen Sie mit sorgfältiger Beachtung der deutschen und englischen Sprachweise:—*We have been living* here for five years. Not *feeling* quite well, she remained at home. We did not know what *to think* of it. All (that) I can do.. ..The joys they long *for* .... He acts *with* and *for me*. We praised him *for being* deligent.—Es klopft jemand. Vergienge doch die Zeit nicht so schnell! Du sprichst und er schweigt! Ich hätte wohl Lust mitzugehen. Achtung! Die von ihrer Familie sehnlich erwartete Mutter. Dadurch, daß er ihn so beleidigte, machte er ihn zu seinem Feinde.

III. Uebersetzen Sie ins Deutsche:—

A great festival is celebrated to-day in the capital The Grand-Duchy of Baden lies in the South of Germany. Frankfort is one of the four free towns. They sat under (in) the shade of a very old oak. On the top of the hill stood a decayed (verfallen) but very picturesque ruin. What were you speaking of when I came? Is not this a piece of petrified wood? Since our cousins have departed, it is very quiet in the house. Their country-seat *is situated* (lies) in the neighbourhood of a watering-place (Badeort, m.) which has been famous *ever* (already) since the time of *Charlemagne* (Charles the Great.

IV. Litteratur.

1. Nennen Sie die vornehmsten Schriftsteller der ersten schlesischen Schule. In welcher Richtung haben sie sich um die deutsche Litteratur verdient gemacht?

2. Schreiben Sie kurze Berichte über Gottsched, Gessner, Liscow, Zacharia, und Lichtenberg.

3. Bezeichnen Sie den speziellen Charakter der folgenden Werke, und nennen Sie die Verfasser derselben:—Karl Stuart, Arminius und Thusnelda, Simplicissimus, Die Türkenpredigt, Die Noachide, Horazische Oden, Die Alpen, Satirische Briefe, Der Triumph der guten Frau, Die Geschichte der Kunst des Altertums.

B.A. ORDINARY EXAMINATION.

GERMAN.

THURSDAY, APRIL 21ST:—MORNING, 9 TO 12.

Examiner.....C. F. A. MARKGRAF, M. A.

I. Überſetzen Sie ins Deutſche:—

(A) The Gauls, seeing these preparations, left their camp, and advanced to meet the enemy. They were drawn up on the banks of the river, when the Carthaginian detachment arrived on their rear, and lighted fires as a signal of their approach. Hannibal observing the smoke, notwithstanding the posture which the enemy had taken to resist his landing, instantly put off from the shore: both armies shouted; but the Gauls being thrown into great consternation by the report and effects of an attack which they little expected on their rear, without resistance gave way to the Carthaginians in front, and were speedily routed.

Ferguson, *Roman Republic.*

(B) Resting high upon the eastern slope of the Andes, lies the flank of the great forest which throws its dense shade over the larger portion of the Amazonian Valley. From the Andes it stretches two thousand miles eastward to the Atlantic, and from the Llanos of Venezuela upon the north sweeps southward, without a break, to the Pampas of Buenos Ayres. The depths of that primeval forest have, for ages, been known only as the home of warring tribes of wild Indians; the hum of civilization has scarcely approached its borders, and to-day its deepest solitudes are unbroken save by the never-ceasing rush of its hurrying rivers.

Myers, *Amazonian Forest.*

II. Grammatik.

1. Zeigen Sie mit Hinzufügung von Beiſpielen den Unterſchied zwiſchen Umlaut und Ablaut.

2. Geben Sie Beiſpiele von primitiven Verben, Subſtantiven und Adjektiven.

3. Geben Sie die Bedeutung und Ableitung der folgenden Wörter:—führen, nicken, horchen, Spruch, Bürde, Gabe, ſtürzen, flügeln, Kleinigkeit, Günſtling, entkräften, begeiſtern, Jugend, Gemeinſchaft, Eigentum, erobern, flück, Bündnis, Gebirge, Mühſal, vernichten.

4. Erklären Sie umſtändlich die Regeln, welche ſich auf die Wortfolge deutſcher Haupt- und Nebenſätze beziehen, und erläutern Sei dieſelben durch Beiſpiele.

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III. Übersetzen Sie aus Schiller's „Wallensteins Tod":—

Dritter Aufzug. 15. Auftritt. Seiten 99-100.

Vierter Aufzug. 2. Auftritt. Seite 126.

(*a*) Erzählen Sie in Kürze die Hauptbegebnisse aus Schiller's Leben. Heben Sie seine Verdienste als dramatischer Dichter hervor, und erwähnen Sie seiner vorzüglichsten Schauspiele. *b*. Welchem seiner Werke hat Schiller den Stoff zur Verfaßung von „Wallenstein" entlehnt? Was können Sie in Bezug auf die allgemeine Anordnung und Ausführung, den Versbau, die Sprache und das Pathos dieses Dramas berichten?

B. A. ADDITIONAL.

GERMAN

SATURDAY, APRIL 2nd:—AFTERNOON, 2 to 5.

Examiner, ... C. F. A. MARKGRAF, M. A.

I. —bersee Sie aus Lessing's „Nathan der ei e":—

III. Aufzug. 7. Auftritt. Seiten 89–90.

IV. Aufzug. 2. Auftritt. Seite 86.

a. Welche besondere Idee hat der Autor in diesem Drama zur Anschauung gebracht? In welcher Scene kozentriert sich das Interesse desselben?

II.—Übersetzen Sie aus Schiller's „Geschichte des dreißigjährigen Krieges:—

Viertes Buch. Seiten 321–322.

III. Übersetzen Sie aus Heine's „Buch der Lieder":—

Das Lied von den Dukaten. Nummer 17. Seite 71.

Die Heimkehr Nummer 40. Seiten 153–154.

Die Nordsee. Nummer 2. Seiten 220–221.

a. Schreiben Sie eine kurze Skizze von Heine's Leben.

b. In welchem Gebiete moderner Litteratur nimmt Heine mit Recht eine hervorragende Stellung ein? Was können Sie über den Stil und Charakter seiner Schriften berichten?

B.A. HONOURS.

GERMAN.

SATURDAY, APRIL 2ND:—MORNING, 9 TO HALF PAST 12.

Examiner,.....C. F. A. MARKGRAF, M.A

I. Übersetzen Sie aus Goethe's „Faust" die folgenden Stellen:—
Seiten 31–32.
Seiten 42–43.
Seite 65.

(*a*). Geben Sie die Data der stufenweisen Entwickelung und der Vollendung dieses Dramas.

(*b*). Skizziren Sie die Charaktere von *Faust* und *Mephistopheles*.

(*c*). Geben Sie kurz den Inhalt von Faust's Monolog auf Seiten 17–21.

II. Mittelalterliche Litteratur (1150–1350).

1. Von wem wurde die ritterlich-höfische Poesie in Deutschland begründet? Nennen und erklären Sie die Hauptformen derselben.

2. Erwähnen Sie der Stoffe, welche von den höfischen Dichtern am häufigsten behandelt wurden.

3. Kontrastiren Sie die didaktischen Dichter mit den höfisch epischen.

4. Schreiben Sie kurze Notizen über Walther von der Vogelweide, Ulrich von Lichtenstein, Hartmann von Aue, und Wolfram von Eschenbach.

5. Nennen Sie die Verfaßer der folgenden Werke, und die Dichtart, in welcher die letzteren abgefaßt wurden:—Der Renner, Tristan und Isolt, der arme Heinrich, Kaiser Otte mit dem Barte, das Rolandslied, die Kaiserchronik, der Pfaffe Amis.

6. Nennen Sie die Gedichte, welche dem ostgotischen Sagenkreise angehören.

III. Die Deutsche Sprache (Schleicher).

Heuschrecke, Nachbar, Karwoche, Dietrich, Fridrich, Pilger, Bursch Maulwurf.

2. Stellen Sie die A-Reihe der indogermanischen Ursprache mit der der deutschen Grundsprache zusammen, und erklären Sie die Veränderungen im Vokalismus der letzteren.

3. Erörtern Sie die Einwirkung (*a*) der Konsonanten, und (*b*) der Vokale auf die vorhergehenden Vokallaute, und weisen Sie Beispiele vor.

4. Veranschaulichen Sie durch Beispiele die Anwendung der drei Vokalreihen des Mittelhochdeutschen in der Bildung der Konjugationsformen und der Nominalstämme.

5. Worin besteht der sprachliche Charakter des Mittelhochdeutschen im Gegensatz zu dem des Althochdeutschen? Geben Sie Beispiele.

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HEBREW—ELEMENTARY COURSE.

THURSDAY, MARCH 31, 2–5 P.M.

Examiner, REV. PROF. COUSSIRAT, B.A., B.D., Officier d'Académie.

1. Read the pointed and the unpointed text of Genesis I and II.

2. Translate: וַיְבָרֶךְ אֹתָם אֱלֹהִים וַיֹּאמֶר לָהֶם אֱלֹהִים פְּרוּ וּרְבוּ וּמִלְאוּ אֶת־הָאָרֶץ וְכִבְשֻׁהָ וּרְדוּ בִּדְגַת הַיָּם וּבְעוֹף הַשָּׁמַיִם וּבְכָל־חַיָּה הָרֹמֶשֶׂת עַל־הָאָרֶץ׃

3. Parse the verbs of the preceding sentence.—Explain the substitution of ֶ to ֵ in the first two verbs.

4. Translate וַיִּצֶר יְהוָה אֱלֹהִים מִן־הָאֲדָמָה כָּל־חַיַּת הַשָּׂדֶה וְאֵת כָּל־עוֹף הַשָּׁמַיִם וַיָּבֵא אֶל־הָאָדָם לִרְאוֹת מַה־יִּקְרָא־לוֹ וְכֹל אֲשֶׁר יִקְרָא־לוֹ הָאָדָם נֶפֶשׁ חַיָּה הוּא שְׁמוֹ׃

5. Parse the nouns, and explain the nature and the use of the accents and the dageshes found in that sentence.

6. Point and translate the following: ויקח יהוה אלהים את האדם וינחהו בגן ערן לעבדה ולשמרה׃

7. Render into Hebrew: Ye (masc.) are the light of the earth.—Who created man in his image?—In the garden which God planted was fruit.

8. Translate and parse: לֹא תַעֲזֹב הָאִשָּׁה אֶת־אִישָׁהּ׃

9. Supply the vowel-points in קטלתן and הקטל

10. Give a short paradigm of the Niphal and Hiphil of בָּדַל

HEBREW—INTERMEDIATE COURSE.

THURSDAY, MARCH 31, 2 to 5 P.M.

Examiners, REV. PROF. COUSSIRAT, B.A., B.D., Officier d'Académie.
.....REV. PROF. WEIR, L.L.D.

1. Reading.

2. Translate: (A) Gen. Chap. I, verses 16, 17 and 18. (B) Exodus, Chap. XX, verses 17–20 (inclusive). (C) Deuteronomy XXXII, verses 39–43 (inclusive).

3. Parse (1) וַיַּעַשׂ (2) לְמֶמְשֶׁלֶת (3) וַיִּתֵּן (4) לְהָאִיר (5) וּלְהַבְדִּיל (6) בַּיִת giving pl. absolute and construct. (7) מַצִּיל (9) אֶמְיָת giving pl. absolute and construct. (8) וְשׁוֹרוֹ (10) אֶשָּׂא and indicate the class to which each verb belongs.

4. Name with examples the different classes of guttural verbs of contracted verbs, and of quiescent verbs.

5. Attach the pronominal suffixes to the singular and plural of כֶּלֶךְ

6. What is meant by vav conversive? How is it pointed?

7. State the peculiarities of ע"ע verbs, and give the short paradigm of the Hiphil of סָבַב

8. Write out the Imperative Kal, Niphal and Hiphil of גָּלָה

9. Translate and parse קָדוֹשׁ יֵאָמֵר לוֹ: אַשְׁרֵי אָדָם שֹׁמֵעַ לִי

Render into Hebrew: The dead do not praise the Lord.—They said to us: Our God Reigns.

10. Point and translate the Masoretic note concerning the Thorah, at the end of the book of Deuteronomy.

HEBREW—ADVANCED COURSE.

THURSDAY, MARCH 31, 2–5 P.M.

Examiner, REV. PROF. COUSSIRAT, B A., B.D., Officier d'Académ ie.

1. Reading.
2. Translate literally Job IV, 17–21 (inclusive).
3. Parse fully the verbs in verse 17.

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4. Translate literally Ecclesiastes III, 18–22 (inclusive).

5. Parse the verbs and nouns in verse 18.

6. Point and translate the Masoretic note at the end of the book of Ecclesiastes.

7. Translate Jeremiah I, 17–19 (inclusive).

8. Render into Hebrew: The Prophet Jeremiah said to the Lord that he could not speak, because he was a child, and that he was afraid of his enemies.

9. Write explanatory notes on the following words: מִלִּין, שֵׂטָן, נִשְׁמָע, פַּרְדֵּס, רְעוּת, קֹהֶלֶת (as found in Ecclesiastes 12, 13).

10. Explain briefly the nature of the Talmud.

THE NEIL STEWART PRIZE.

GRAMMAR.

WEDNESDAY, APRIL 13, 2–5 P.M.

Examiner, REV. PROF. COUSSIRAT, B.A., B.D., Officier d'Académie.

1. Give the rules for the distinction of Qamets and Qamets-Chatuph.

2. Point out the cases in which short vowels occur in open syllables.

3. Enumerate the unusual conjugations connected with Piël and Hiphil.

4. Write down a paradigm (pret. Kal. and Piel, 3 pers. sing. and plur. masc.; and inf. Kal.), of the regular verb with suffixes.

5. Give a short paradigm in Niphal and Hiphil of סבב

6. Give a paradigm with suffixes of חָזָה

7. Point out the cases in which the Article is commonly employed.

8. Render into Hebrew: Three sons and three daughters.—Twenty cities.—Fourteen days.—Sixty-two days.—One hundred and twenty-seven years.—In the second year.—State the rules.

9. When is the shortened Future used principally?

10. Explain the construction of the poel Participle.

THE NEIL STEWART PRIZE.

TRANSLATION.

WEDNESDAY, APRIL 13, 9–12 A.M.

Examiner, REV. PROF. COUSSIRAT, B.A., B.D., Officier d'Académie.

1. Translate literally Genesis IX, 18–24, (inclusive).

2. Parse verse 27.—Explain the forms יֶפֶת and לְמוֹ.—Write down the plural of the nouns in the singular, and the singular of the nouns in the plural (abs. and const. states).

3. Translate literally Habakkuk II, 9–14 (inclusive).

4. Render into Hebrew: Woe to them that get evil gains for their houses, that they may set their nests on high, that they may be delivered from the hand of evil.

5. Point and translate the Masoretic notes found in the book of Habakkuk.

6. Translate literally Psalm IV, 1–7 (inclusive).

7. Parse the verbs in verse 2.

8. Write short explanatory notes on :—

סלה , למנצח , מזמור , תהלים : נחילות , נגינות—

Give the Latin and Greek translations of those words from the Vulgate and the Septuaginta.

SYRIAC.

FRIDAY, APRIL 22, 2–5 P.M.

Examiner, REV. PROF. COUSSIRAT, B.A., B.D., Officier d'Académie.

1. Reading.

2. Translate: (1) St. John's Gospel, I, 8 to 10.
(2) St. Matthew's Gospel, II, 6, 7.
(3) St. Mark's Gospel, XIV, 32, 33.
(4) St. Luke's Gospel, XXIII, 26, 27.
(5) Romans, VI, 9, 10.
(6) Revelation, V, 5, 6,

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3. Parse fully in Acts XVII, verse 23.

4. Give a short paradigm of the: (1) *Pael* and *Aphel* of the regular verb.

(2) *Peal* of first radical *Olaph* quiescent verb.

(3) *Shaphel* of third radical *Olaph* verb.

5. Give a paradigm with suffixes of: (1) *Melek.*

(2) *Bethouloh.*

6. State fully the differences you have observed between the Syriac and the Hebrew languages.

7. Write down a short history of the Syriac language.

FIRST YEAR.

CHEMISTRY,

MONDAY, APRIL 18TH;—MORNING, 9 TO 12.

Examiners, ... { B. J. HARRINGTON, B.A., PH.D. / NEVIL N. EVANS, B.A.SC.

1. What is a metal? How many metals are known? How may they be classified?

2. State what you know with regard to the sources from which Potassium Carbonate is largely obtained.

3. How does Arsenic occur in Nature? Explain fully its detection by Marsh's test.

4. Name the different kinds of Mineral Coal Which are suitable for the manufacture of Coal-gas? How is the Coal-gas made? What is Water-gas?

5. Name the principal Amyloses and give their general formula. Describe any two of them.

6. Essential Oils. How are they obtained from plants? What are their properties?

7. What are the principal Vegetable Acids? State what you know with regard to their occurrence in plants, and describe the preparation of one of them.

8. Distinguish between fermented and distilled liquors, citing examples.

9. What are the principal kinds of glass? What their composition? How are different colours imparted to them?

10. Give the formulæ of Boric Acid and Borax. How is Boric Acid obtained in Tuscany?

11. What takes place when a solution of Silver Nitrate is added to one of Hydrogen Disodium Phosphate? Give the equation.

12. How much Phosphorus can be obtained from 150 tons of bones containing 54 per cent of Calcium Phosphate?

SECOND YEAR IN APPLIED SCIENCE (*Chemistry Course*), AND THIRD YEAR ARTS (*Additional Department*).

CHEMISTRY.

MONDAY, APRIL 18TH:—MORNING, 9 TO 12.

Examiner, ...B. J. HARRINGTON, B.A., PH.D.

1. Hydrochloric Acid is added to a solution of Potassium Chromate and Sulphuretted Hydrogen passed through the solution. What takes place? Give the equation.

2. A solution of Calcium Nitrate required 0.5 grm. of Ammonium Oxalate for complete precipitation. What quantity of Calcium Nitrate did it contain?

3. How would you prepare Caustic Soda from Sodium Bicarbonate?

4. Name the principal inorganic bodies which are insoluble in acids, and state briefly how they may be distinguished.

5. Describe the separation of Barium, Strontium, Calcium, and Magnesium.

6. What takes place when Hydrochloric Acid is added to a solution of Sodium Thiosulphate?

7. Describe the analysis of a solution containing Iron, Manganese, Zinc and Aluminium as Chlorides.

8. How would you distinguish the following Acids:—Formic from Acetic, Ferro-cyanic from Ferri-cyanic, Orthophosphoric from Pyrophosphoric?

9. What is Euchlorine? How is it obtained?

10. What reaction takes place when chlorine is passed into an aqueous solution of Urea?

11. How are Chlorides detected in presence of Bromides and Iodides?

12. What volumes of Metallic Sodium (sp. gr. 0.97) and Chlorine gas can be obtained from a cubic decimetre of Rock-salt (sp. gr. 2.1)?

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SECOND AND THIRD YEARS IN APPLIED SCIENCE

(*Chemistry Course*) AND THIRD YEAR ARTS (*Addditional*).

THEORETICAL CHEMISTRY.

WEDNESDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner, ...B. J. HARRINGTON, B.A., PH.D.

1. Point out any striking analogies in the constitution of Inorganic and Organic compounds.

2. What evidence have we as to the existence of Hydroxyl in any of the so-called Hydroxyl Acids?

3. What are Glycols? Give the formula of primary Propyl Glycol.

4. Give a tabular classification of the Amines.

5. An organic compound gave on analysis the following percentage composition:—Carbon 23.75, Hydrogen 5.95, Chlorine 70.30. Deduce its empirical formula.

6. How may the constitution of Anthracene be represented graphically? What is the relationship of Anthraquinone and Alizarene to Anthracene?

7. By what reaction are the Xylenes obtained from Toluene? What acids are produced by the oxydation of the Xylenes?

8. What two classes of compounds are produced by the action of Chlorine upon Napthalene?

9. Give the formula and deduce the percentage composition of Ethyl Butyrate.

10. What substances result from the action of Ammonia on Carbonyl Chloride? Give the equation.

B.A. ORDINARY AND THIRD YEAR IN APPLIED SCIENCE.

MINERALOGY AND LITHOLOGY

FRIDAY, APRIL 15TH:—AFTERNOON, 2 TO 5.

Examiners, ... { J. WM. DAWSON, LL.D., F.R.S.
B. A. HARRINGTON, B.A., PH. D.

1. How would you distinguish Bituminous Coal from Lignite, Gypsum from Anhydrite, Iron Pyrites from Copper Pyrites?

2. Describe Apatite and Fluor-spar, and state what you know with regard to their occurrence in nature.

3. From what geological formations in Canada have the best sandstones and limestones for structural purposes been obtained? Mention any structures as illustrations.

4. What is the most frequent source of Fire-clays? Explain their formation.

5. Explain the method of classification adopted in the arrangement of the rock-specimens in the college museum.

6. Name and briefly describe the principal schistose rocks.

7. What are the more important glassy rocks? Describe two of them

8. Explain the terms clastic, microscopic, accessory, metamorphic.

9. Describe Syenite, Diabase and Porphyrite.

10. Describe carefully each of the specimens exhibited, and state what you know with regard to their geological relations.

THIRD YEAR HONOURS IN NATURAL SCIENCE AND THIRD YEAR IN APPLIED SCIENCE (*Mining and Chemistry Courses*).

MINERALOGY.

MONDAY, APRIL 25TH :—MORNING, 9 TO 12.

Examiners,..... { J. WM. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. What are the laws of symmetry and simple mathematical ratio?

2. What are the principal irregular forms and imitative shapes of minerals?

3. What are the best defined groups of isomorphous minerals? Name the species in each and give their formulæ.

4. What is the cause of the striæ (*a*) on the prismatic faces of Quartz crystals (*b*) on the faces of rhombic dodecahedrons of Magnetite (*c*) on the faces of pentagonal dodecahedrons of Pyrite (*d*) on basal cleavage surfaces of triclinic Felspars?

5. Enumerate the different kinds of pyramid in the Hexagonal System, pointing out their relation to one another and giving symbols in each case.

6. Arrange the following minerals in the order of their refractive indices :—Quartz, Garnet, Calcite, Fluorite, Diamond, Sphalerite. What is the lustre of each species? What the cleavage?

7. What are the principal forms of the Orthorhombic System? Explain the notation of the faces.

8. What forms are produced (*a*) by bevelling the edges of a cube, (*b*) by bevelling the edges of a regular octahedron, (*c*) by truncating the edges of a rhombic dodecahedron? Give symbols.

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9. Explain twinning, and give examples of the different kinds.

10. Describe the crystals made up of the following forms:—

(1). ∞P. $\infty \breve{P}\infty$. $\infty \bar{P}\infty$. $P\infty$. P. 2P. —P. 0P.

(2). $\infty O\infty$. O. 202. $\left[\frac{402}{2}\right]$ $\frac{\infty 02}{2}$

(3). $\infty P2$. ∞R. 0R. 4R. —2R.

11. Give a careful description of each of the specimens exhibited.

THIRD YEAR AND SECOND YEAR APPLIED SCIENCE.

ZOOLOGY.

MONDAY, APRIL 18TH:—9 TO 12 A.M.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. What two classes of the Province *Protozoa* may be regarded as the highest in rank? Define them and give examples.

2. To what class of animals do *Cyanea* and *Sertularia* belong? State their resemblances and differences.

3. Into wha ttwo groups may the class *Anthozoa* be divided, and on what grounds?

4. Mention the groups of fossil *Hydrozoa* and *Anthozoa* not now found living, and describe one of them.

5. Define the class *Brachiopoda*, and mention some recent and fossil families.

6. Describe the structures of any animal of the class *Lamellibranchiata*, or the class *Cephalopoda*.

7. Define the class *Crustacea*, and state its leading sub-divisions. Give examples of each, recent and fossil.

8. Describe the external parts and the metamorphosis of an Insect.

9. Describe fully any typical example of the class *Echinodermata* or of the class *Annelida*.

10. What are the distinctive characters of the classes *Pisces*, *Amphibia*, *Reptilia*, *Aves*?.

11. Characterize the class *Mammalia*, and state the distinctions of its leading sub-divisions, with examples.

12. Describe, and refer to their Provinces and Classes, the specimens exhibited.

B.A. ORDINARY EXAMINATION
AND THIRD YEAR APPLIED SCIENCE.

GEOLOGY.

FRIDAY, APRIL 15TH:—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State in order the portions of the geological scale of chronology represented in the Province of Quebec, with their general geographical distribution.

2. State the distribution of the Laurentian and Huronian rocks in North America, and mention their distinctive lithological characters.

3. Describe the Siluro-Cambrian or Ordovician of Canada, and state how it is represented in England.

4. Explain the peculiarities of the Oriskany, Calciferous and Potsdam, and of the Oolitic, and Nummulitic Limestones, with their geological relations and characteristic fossils.

5. How would you distinguish by fossils the Trenton Limestone from the Niagara Limestone, and this from the Corniferous?

6. State in order the Upper Silurian Formations represented in Ontario, with their general geological distribution.

7. Describe the subdivisions of the Carboniferous in Nova Scotia, or of the Tertiary or Cainozoic in Western Europe.

8. State the zoological or botanical and geological relations of *Favosites*, *Lepidodendron*, *Calamites*, *Productus*, *Dadoxylon*, *Ammonites*, *Psilophyton*, *Paradoxides*, *Palæoniscus*, *Belemnites*, *Palæotherium*, *Mastodon*, *Pliosaurus*.

9. Give some account of the Cretaceous formations west of Manitoba.

10. State the normal succession of deposits in the Pleistocene of Canada, and the probable mode of their deposition.

11. State and explain the data for the determination of the relative ages of stratified rocks, and the manner of applying them.

12. State the geological formations to which the fossils exhibited belong, and name the fossils.

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B.A. HONOURS IN NATURAL SCIENCE AND B.A. Sc. (*Mining Course*).

MINERALOGY.

MONDAY, APRIL 4TH:—MORNING, 9 TO 12.

Examiners, ... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. State what you know with regard to the characteristics and mode of occurrence of the native metals Copper, Silver, and Platinum.

2. What are the principal decomposition products of Stibnite, Molybdenite, Menaccanite, Orthoclase, Labradorite?

3. Give careful descriptions of the following species:—Aragonite, Wavellite, Epidote, Nepheline, Proustite.

4. Discuss the origin of Uralite, Serpentine, Malachite, Stilbite and Asphaltum.

5. State what you know with regard to the action of Hydrochloric Acid upon each of the following minerals:—Sphalerite, Menaccanite, Pyrolusite, Turquois, Wollastonite, Chabazite, Chrysolite, Leucite.

6. Give the crystalline forms and cleavages of Pyrrhotite, Fluorite' Pyroxene, Topaz, Albite and Anhydrite.

7. What do you understand by Parallel Grouping, Distortion, Hemimorphism, Paramorphism, Tetartohedrism?

8. Characterise the Monoclinic System of Crystallography, explaining fully the notation of the faces.

9. Explain the origin of liquid and gas cavities in minerals.

10. What are the blowpipe characters of Millerite, Brookite, Natrolite' Wolfram, and Azurite?

SPECIMENS:—Afternoon, 2 to 4.

Name and describe the specimens exhibited. State also what you know with regard to their geological relations.

B.A. HONOURS IN NATURAL SCIENCE AND FOURTH YEAR IN APPLIED SCIENCE (*Mining and Chemistry Courses.*)

PETROGRAPHY.

MONDAY, APRIL 25TH:—MORNING, 9 TO 12.

Examiners, ... { J. WM. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. Name and briefly describe the principal types of macroscopic and microscopic structure met with in rocks.

2 Show by sketches the relationship of the elasticity and crystallographic axes in Orthoclase, Hornblende, and Pyroxene.

3. How may Olivine and Pyroxene be distinguished microscopically when present in the same rock section?

4. How would you recognise Nosean, Hauÿn and Leucite in rock-sections? In what rocks do these minerals generally occur?

5. Distinguish between the first and second phases of rock consolidation.

6. What accessory minerals are most frequently met with in Gneiss Mica-schist, Chlorite-schist, and Diorite?

7. What are the characteristics of Phonolite? What the principal, varieties of the rock?

8. State what you know with regard to the Porphyrites and their classification.

9. Gabbro, Dunite, Tonalite. Briefly describe these rocks.

10. Explain the significance of the terms older and younger as employed in rock-classification. What is the value of the distinction?

11. What rocks occur in the vicinity of Montreal? Describe them briefly, and state what you know with regard to their mode of occurrence.

12. Describe and classify the specimens exhibited.

Determination of rocks with the microscope, afternoon, 2 to 4.

B.A. HONOUR EXAMINATIONS IN GEOLOGY AND NATURAL HISTORY, 1887.

Second Paper.

GEOLOGY AND PALÆONTOLOGY. (*In Part.*)

Tuesday, April 12th:—9 a.m. to 12, and 2 to 5.

Examiners,..... { J. W. Dawson, LL.D. F.R.S.
B. J. Harrington, B.A., Ph.D.

1. Draw a line of section from the Laurentian axis to the western end of Lake Erie, and indicate the formations cut by it and their geological relations.

2. Characterise the Laurentian rocks of Canada, with reference to their mineral character, fossils, subdivisions and probable mode of deposition.

3. State the geographical distribution of the Huronian or Kewenian in Canada, and the characteristic rocks of the typical districts, with the views which may be held as to their geological equivalents elsewhere.

4. Describe the Palæozoic geology of the vicinity of Montreal, naming characteristic fossils and describing the results of igneous action.

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5. What formations in Canada would be indicated by the prevalence of the following genera: *Endoceras, Asaphus, Favosites, Phyllograptus, Spirifer, Petraia, Paradoxides, Columnaria?*

6. Describe the following formations, and state their geological position and special points of interest connected with them:—Acadian, Niagara, Salina.

7. Compare the rocks and fossils of the Quebec Group with those of corresponding formations in the New York series and in England. State the distribution of the Group in Canada.

8. Give in a tabular form the series of Upper Silurian rocks in Canada, with their European equivalents, and describe one of the formations, naming some of its fossils.

9. Describe shortly or figure *Eozoon, Scolithus, Conocoryphe, Ambonychia, Ophileta, Tetradium, Murchisonia, Stromatopora, Piloceras;* and state their geological relations.

10. How are the subdivisions of the Cambrian of Britain represented in Eastern America?

EXAMINATION IN SPECIMENS.

Refer the specimens exhibited to their Geological formations, and to their places in the Zoological classification.

B. A. HONOUR EXAMINATIONS.

THIRD PAPER—GEOLOGY AND PALÆONTOLOGY (IN PART.)

WEDNESDAY, APRIL 20TH:—9 A.M. TO 12, AND 2 TO 5.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. Indicate the differences between the Erian rocks of Gaspé and New Brunswick and these of Ontario. State the succession in the latter.

2. Describe the Windsor series and the true coal measures in Nova Scotia, and give in detail the structure and accompaniments of a bed of coal.

3. State the structure and characteristic fossils of the Permo-carboniferous of Nova Scotia, and mention what is known of Permian in other parts of North America.

4. In what respects do the Cretaceous Deposits of Western Canada differ from the representative formations in Europe? Tabulate the Western Cretaceous, stating some of the fossils.

5. Enumerate in zoological series the principal fossils of the Canadian Pleistocene, and explain the phenomena of raised beaches and terraces.

6. In what formations would the following genera of fossils be expected to occur:—*Gryphea, Belemnitella, Nummulites, Palæotherium, Psilophyton, Mosasaurus, Ceratites, Pentremites, Zeuglodon, Dinoceras, Walchia Lepidophloios, Machæracanthus.*

7. State what you know of mountain elevation and igneous ejection in Canada later than the Palæozoic.

8. State what you know of the occurrence of coal in the Cretaceous and Laramic series in Western Canada.

9. What is the geological range in Canada of the following genera:—*Mastodon, Baculites, Inoceramus, Platanus, Ostrea.*

10. Make a general section from the Pacific Coast of Vancouver Island to Winnipeg, showing orography and superficial deposits as well as geological structure.

Examination in Specimens.

11. Catalogue the Fossils contained in the specimens exhibited, and refer them to their respective Geological Formations.

B.A. HONOUR EXAMINATIONS.

(FOURTH PAPER) PALÆONTOLOGY AND PRACTICAL GEOLOGY.

TUESDAY, APRIL 26TH:—MORNING, 9 TO 12.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., PH.D.

1. Notice the parts which would be most important in describing or determining a Trilobite or a Crinoid, and illustrate by figures.

2. State in tabular form the families of Brachiopods, and their range in geological time.

3. What are the characteristic differences of Nautilidæ, Orthoceratidæ and Ammonitidæ, and their range in time.

4. Describe the parts of a typical Rugose and Tabulate Coral.

5. Indicate the relation of the orders of Fishes to geological time.

6. State what you know of *Astylospongia, Receptaculites, Phyllograptus Eocystites, Paradoxides, Nummulites.*

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7. What are the instruments to be used and facts to be recorded in examining a Rock Section or Exposure?

8. Explain the methods of producing Geological Maps, and the relations of maps to sections, with an example.

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9. What are the methods of discovering and tracing Mineral Veins, and what irregularities may be expected in them, with their causes? Give Canadian examples.

10. What are the indications of Faults when these cannot be actually seen?

11. In the case of the junction of igneous masses with beds, what facts are most important with reference to conclusions as to age?

12. Describe the mode of occurrence of Gold, or Ores of Copper or Iron in any Canadian mining district.

SECOND YEAR.

BOTANY,

WEDNESDAY, APRIL 20TH :—9 TO 12 A.M.

Examiner,.....D. P. PENHALLOW, B.Sc.

1. Show what influences determine the distribution of Plants.

2. Explain the leading types of reproduction, and show what structural elements are requisite for each. Examples.

3. What structural elements are involved in a fruit? Outline the leading types of fruit, and show their essential distinctions. Examples.

4. Outline the leading characters of the Thallophytes and Bryophytes, and show which is the higher group.

5. Show in what respects the Pteridophytes and Gymnosperms are allied, and in what respects they are distinct. Also which is the higher group.

6. Give the homologies of the reproductive elements in the Angiosperms, Pteridophytes and Bryophytes.

7. Outline the leading divisions in classification, show upon what grounds the primary division of the vegetable kingdom is based, and what constitutes the principle upon which a natural system of classification is founded.

8. What is polyembryony, and from what does it result?

9. What is understood by the use of the term "Alternation of Generations?" Define the limits of the generations in a fern, a pine and a bean.

10. Show what parts are contained in the seed, and explain the principal variations in the structure of the embryo.

VEGETABLE HISTOLOGY.

FRIDAY, APRIL 15TH:—MORNING, 9 TO 12.

Examiner,.....D. P. PENHALLOW, B.Sc.

1. Explain the action of $H_2 SO_4$ upon (1) the cell wall, (2) starch, (3) protoplasm.

2. Give a method of distinguishing (1) cellulose (*a*) modified (*b*) unmodified; (2) starch; (3) protein compounds; and show what the reaction will be in each case.

3. Give the composition, occurrence and distinguishing characteristics of the amyloid compounds.

4. Show what relation exists between the various cells of living tissues, and give a method by which this relation may be demonstrated.

5. Outline a method to be pursued in treating a specimen for the determination of aleurone and crystalloids.

6. Explain the action of $K_2 O$ on the (1) cell wall, (2) albuminoid compounds, (3) starch.

7. Explain the characteristics of generative tissue; show how many kinds there are and where they occur.

8. Give the characteristics of cork tissue; show under what conditions it is formed and where.

9. Give the structural distinctions between collenchyma, sclerenchyma, and wood; and also show what reaction may be employed for their recognition.

10. Give a method for (1) the removal of coloring matter and cell contents, (2) the separation of cells from one another. State the principle upon which the action is based, in each case.

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MATHEMATICS AND NATURAL PHILOSOPHY.

FIRST YEAR.

GEOMETRY.

TUESDAY, APRIL 12TH:—MORNING, 9 to 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Divide a straight line into two parts, so that the rectangle contained by the whole line and one of the parts may be equal to the square on the other part.

Assuming the whole line to be 1 show that the longer part is $\frac{1}{2}(\sqrt{5}-1)$.

2. Inscribe a regular pentagon in a circle.

3. When a perpendicular is drawn from the right angle of a right-angled triangle to the hypotenuse, the triangle is divided into triangles which are similar to the whole triangle and to each other.

4. If four straight lines are proportional, the rectangle contained by the extremes is equal to the rectangle contained by the means.

5. If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

6. A line A B is cut internally at P; cut the line externally at Q so that AQ : BQ :: AP : PB.

7. The latus rectum of a parabola is equal to twice the distance of the focus from the directrix.

8. The square on the ordinate of a parabola is equal to the rectangle contained by the latus rectum and the abscissa.

9. If Q V is the ordinate to the diameter through any point P of a parabola, show that $QV^2 = 4\,F\,P.\,PV$, F being the focus.

10. The difference of the focal distances of a point on a hyperbola is constant.

FIRST YEAR.

TRIGONOMETRY (*First Paper*)—ALGEBRA.

THURSDAY, APRIL 14TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. State and prove the rule for reducing radians to degrees.

2. State the changes in magnitude and sign of the tangent of an angle as the angle increases from 0° to 360°.

3. Find all the other trigonometrical ratios in terms of the tangent.

4. Show that

(1) $\sin^2 A + \cos^2 A = 1$.

(2) $\sin(90^\circ + A) = \cos A$.

(3) $\cot^2 A - \cos^2 A = \cos^4 A \operatorname{cosec}^2 A$.

(4) $\cos(A + B) = \cos A \cos B - \sin A \sin B$.

(5) $\dfrac{\sin A - \sin B}{\cos A + \cos B} = \tan\left(\dfrac{A - B}{2}\right)$.

5. Show that

(1) $\cos A = 2\cos^2 \dfrac{A}{2} - 1$.

(2) $\dfrac{\sin(A + B)}{\sin A + \sin B} = \dfrac{\cos \dfrac{(A + B)}{2}}{\cos\left(\dfrac{A - B}{2}\right)}$

(3) $\cos 2A = \dfrac{1 - \tan^2 A}{1 + \tan^2 A}$.

6. Find the factors of $x^2 + 2x - 3$, $6x^2 - 13x + 6$, $2x^3 + x^2 - 2x - 1$ $6a^4 x^2 + a^3 x - a^2$.

7. Write down the square of $a^3 - 2a^2 b + 2ab^2 - b^3$, and extract the square root of the result.

8. Reduce $8.2^{-\frac{1}{3}}$, $3.3^{-\frac{3}{4}}$, and $\frac{2}{3}\left(\frac{2}{3}\right)^{-\frac{2}{3}}$ to entire surds; and show that

$$\{(a-b)^2 + 4ab\}^{\frac{1}{2}} \times \left\{(a+b)^2 - 4ab\right\}^{\frac{3}{2}} \times \left\{\frac{a^4 - b^4}{a - b} + 2ab(a+b)\right\}^{\frac{2}{3}} = (a^2 - b^2)^3.$$

9. Solve the equations:—

(1) $\dfrac{4x^2 + 5}{10} - \dfrac{2x^2 - 5}{15} = \dfrac{7x^2 - 25}{20}$,

(2) $\dfrac{4x + 7}{19} + \dfrac{5 - x}{3 + x} = \dfrac{4x}{9}$,

(3) $\left\{\begin{matrix} x + y = 6 \\ x^3 + y^3 = 72 \end{matrix}\right\}$

10. The fore-wheel of a carriage makes 6 revolutions more than the hind-wheel in 120 yards, and the circumference of one is a yard less than that of the other; find the circumferences.

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FIRST YEAR.

TRIGONOMETRY (*Second Paper*).

TUESDAY, APRIL 19TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. In any triangle

$$(1)\quad \cos\frac{A}{2} = \sqrt{\frac{s\,(s-a)}{b\,c}}.$$

$$(2)\quad \tan A + \tan B + \tan C = \tan A \tan B \tan C.$$

$$(3)\quad (a+b)\sin\frac{C}{2} = c.\ \cos\left(\frac{A-B}{2}\right)$$

2. What is meant by the ambiguous case in the solution of triangles? When will there be two solutions?

3. Solve the triangles in which

(1) $a = 221$, $b = 149$, $C = 30^\circ\ 40'\ 35''$.

(2) $a = 40.9$, $b = 24.1$, $c = 18.2$.

(3) $b = 149$, $A = 69^\circ\ 59'\ 2''.5$, $C = 70^\circ\ 42'\ 30''$.

4. A and B are two points 100 feet apart, and C is a point equally distant from A and B; if ACB is 150° what is AC?

5. A, B are two inaccessible points in a horizontal plane, and C, D are two stations at each of which AB is observed to subtend an angle 30°. AD subtends at C 19° 15′, and AC subtends at D 40° 45′. Show that

$$AB = \frac{CD}{\sqrt{3}}$$

SECOND YEAR.

ANALYTIC GEOMETRY.

TUESDAY, APRIL 19TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Find the equation of the line which joins the point (6,—5) to the centre of the circle $x^2 + y^2 - 4x + 2y = 4$.

2. What is the length of the perpendicular from the point (3, —2) to the straight line $3x - 2y = 1$?

3. What is the equation of this perpendicular?

4. Find the formulæ for transforming rectangular co-ordinates when the direction only of the axes is changed.

5. What is the equation of the chord of contact of tangents drawn from (6,—7) to $x^2+y^2 = 25$?

6. Given the base of a triangle, and the length of the medial line drawn from one of its extremities, find the locus of the vertex.

7. Define the latus rectum of a conic section, and find that of the ellipse in terms of the semi-axes.

8. The focal distances of a point on the ellipse are $a—ex$ and $a + ex$.

9. Show that the locus of the centre of a circle which passes through a given point and touches a given straight line is a parabola.

10. Find the equations of the tangent and normal to the hyperbola $2x^2—3y^2 = 12$ at the point $(3,\sqrt{2})$.

SECOND YEAR.

CALCULUS, &c.

TUESDAY, APRIL 12TH :—MORNING, 9 TO 12.

Examiner,..... G. H. CHANDLER, M.A.

1. Assuming the expansion of a^x in terms of A and x, show that $A = \log e^a$.

2. Prove the formula for differentiating a fraction.

3. Show that

(1) $$d\left(\frac{ex}{1+x}\right) = \frac{x\ ex\ dx}{(1+x)^2},$$

(2) $$d\sqrt{\frac{a+x}{a-x}} = \frac{a\ dx}{(a-x)\sqrt{a^2-x^2}},$$

(3) $$d\log\sqrt{\frac{a+x}{a-x}} = \frac{a\ dx}{a^2-x^2},$$

(5) $$d\tan^{-1}\left(\frac{2x}{1-x^2}\right) = \frac{2\ dx}{1+x^2}.$$

4. Expand $\log(1 + x)$ into a series.

5. Explain the meaning of dy and d^2y in Geometry.

6. Find the formula for the radius of curvature at any point of a curve, and apply it to find the radius of curvature at the vertex of a parabola.

7. Find the altitude of the maximum cylinder that can be cut from a given sphere.

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8. Show that

(1) $\int_0^{\frac{1}{2}} \frac{dx}{\sqrt{1-4x^2}} = \frac{\pi}{4}$,

(2) $\int \frac{3\,dx}{4+9x^2} = \frac{1}{2}\,\text{ta}\,\text{A}\left(\frac{3x}{2}\right)$,

(3) $\int \frac{3x\,dx}{4+9x^2} = \frac{1}{6}\log(4+9x^2)$,

(4) $\int \frac{(3x-1)\,dx}{x^3-x^2-2x} = \frac{1}{6}\log\frac{x^3(x-2)^5}{(x+1)^8}$.

9. Prove that the length of the cycloid is four times the diameter of the generating circle.

10. Show that the volume of a prolate spheroid is $\frac{4}{3}\pi a b^2$.

SECOND YEAR.

MECHANICS.

THURSDAY, APRIL 14TH :—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. Prove the formulæ of rectilinear motion, viz. :

$$v = V + ft,\ s = Vt + \tfrac{1}{2}ft^2,\ v^2 = V_2 + 2fs.$$

2. A weight of 8 lbs. is placed on a smooth horizontal table, and is attached by a string to a weight of 12 lbs. hanging over the table; find the velocity generated in one second, and the tension of the string.

3. Explain the action of the compensating lever of locomotives.

4. A uniform beam is placed with one end on a smooth horizontal plane and the other on a smooth inclined plane, and is prevented from sliding by a string which is fastened to the upper end and passes over a pulley at the top of the plane ; find the pressures on the planes.

5. Find the direction and magnitude of the least force which will draw given body up a rough inclined plane.

6. A weight W is placed at any point on a triangular table ; find the pressures on the three legs.

7. Describe the construction and graduation of the steelyard, explaining in particular why the distances on the graduated bar are proportional to the corresponding weights.

8. Find the centre of pressure of a triangle whose base is horizontal and vertex in the surface of the fluid.

9. The breadth of a water passage closed by a pair of gates is 10 ft. and the depth 6 ft. The hinges are placed at one foot from the top and bottom; show that the pressure supported by each of the lower hinges is 4,219 lbs.

10. A piece of cork weighing 1 oz. is fastened to a sinker weighing $3\frac{1}{2}$ oz. It is found that they will just sink when placed in water. The sp. gr. of the cork being $\frac{1}{4}$, what is that of the sinker?

THIRD YEAR.

MECHANICS.

THURSDAY, APRIL 14TH:—MORNING, 9 TO 12.

Examiner,.....G. H. CHANDLER, M.A.

1. A square is divided by its diagonals into four equal triangles; one triangle being removed, find the centre of gravity of the figure formed by the three remaining triangles.

2. The breadth of a water passage closed by a pair of gates is 10 ft., and its depth is 6 ft.; the hinges are placed one foot from the top and bottom; show that the pressure on each of the lower hinges is 4,219 lbs.

3. Find the direction and magnitude of the least force which will draw a given body up a rough inclined plane.

4. The area of a section of the cistern of a barometer is 4 times that of the tube, the mercury stands at 30 inches and the whole length of the tube above the mercury in the cistern is 32 inches. A mass of air which would fill one inch of the tube at atmospheric pressure is now introduced; find the air space at the top of the tube.

5. A cubic foot of air at a temperature of 100° F., and under a pressure of $29\frac{1}{2}$ inches of mercury, is cooled down to 40° F., and compressed by an additional $10\frac{1}{2}$ inches of mercury; find the volume.

6. Describe the arrangement of valves, etc., in a combined plunger and bucket pump.

7. Describe the construction and working of the accumulator.

8. Explain the method of finding the velocity of efflux of liquids and gases through small orifices.

9. A body moves in a circle under the influence of a force which is always directed towards the centre; find the magnitude of the force.

10. A body runs down a plane of 30° inclination and then falls over a vertical cliff 150 feet high. Show that it strikes the ground with a vertical velocity of 100 feet per second, and a total velocity of $40\sqrt{7}$ feet per second, the length of the plane being 50 ft.

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THIRD YEAR.

SPHERICAL TRIGONOMETRY AND PRACTICAL ASTRONOMY.

TUESDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner, ... G. H. CHANDLER, M.A.

1. Prove (without assuming Napier's rules) that in any spherical triangle, right angled at C,

$$\sin A = \frac{\sin a}{\sin c}, \quad \cos A = \frac{\tan b}{\tan c}, \quad \cos c = \cos a \cos b.$$

2. Assuming that in any spherical triangle

$$\cos a = \cos b \cos c + \sin b \sin c \cos A,$$

Show that

$$\cos a = \frac{\cos A + \cos B \cos C}{\sin B \sin C}$$

3. Define the terms Prime Vertical, Parallax, Refraction, Right Ascension, Declination, Azimuth, Hour Angle.

4. Distinguish between apparent and mean solar time; also, between mean solar time and sidereal time. Find the sidereal time at 1 p.m. today.

5. The sun is observed to cross the meridian of Montreal at 11 h. 58 m. 27.32 s. a.m. on April 10th, 1887; what is the error of the clock?

6. A star was observed to be due west at 14h. 12m. 27s., sidereal time find the altitude of the star and the latitude of the place of observation, the right ascension of the star being 10h. 0m. 32s., and its declination 12° 41′ 1″.

7. The observed altitude of the pole star at 4h. 34m. 17s. sidereal time April 1st, 1887, was 43° 27′ 30″; correct this for refraction, and find the latitude of the place of observation.

8. Explain the method of obtaining longitude (1) by the electric telegraph, (2) by lunar distances.

THIRD YEAR.

MATHEMATICS (*Advanced*).

TUESDAY, APRIL 19TH:—MORNING, 9 TO 12.

Examiner, ... G. H. CHANDLER, M.A.

1. Find the co-ordinates of the extremities of the diameter which is conjugate to that passing through the point $(x' y')$ on an ellipse, and hence show that the sum of the squares of conjugate diameters is constant.

2. Show that every ellipse has a pair of equal conjugate diameters, that they bisect the lines joining the extremities of the axes, and that they coincide with the asymptotes of the hyperbola which has the same centre and axes as the ellipse.

3. The locus of the centre of the circle which passes through a given point and touches a given straight line is a parabola.

4. Find the equation of the evolute of the parabola, and hence find the points of intersection of the curves.

5. Find the equations of the cycloid, and hence show that the length of the curve is four times the diameter of the generating circle.

6. Find the formula for the differential of the length of a curve whose equation is given in polar co-ordinates.

7. The angle between the radius vector and the tangent of a logarithmic spiral is constant.

8. Show that $\frac{\sin x - \log (e^x \cos x)}{x^2} = \frac{1}{2}$ when $x = o$.

9. Show that

$$(1) \int \sqrt{a^2 - x^2}\, dx = \tfrac{1}{2} x \sqrt{a^2 - x^2} + \frac{a^2}{2} \sin^{-1} \frac{x}{a},$$

$$(2) \int (1 + x^2)^{\frac{3}{2}} x^3\, dx = \frac{5x^2 - 2}{35} (1 + x^2)^{\frac{5}{2}},$$

$$(3) \int \sin^2 x \cos^2 x\, dx = \frac{1}{16} (2x - \sin 2x \cos 2x).$$

10. A body falls towards the earth under the influence of a force which varies inversely as the square of the distance from the earth's centre. Find the velocity at any point.

SECOND AND THIRD YEARS.

PRACTICAL CONSTRUCTION.

WEDNESDAY, 6TH APRIL, 1887:—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.A., M. INST. C.E.
HERBERT WALLIS, M. INST. C.E., Mech. Supt. G.T.R.

STEAM-ENGINE.

1. Sketch a stuffing-box and gland suitable for a 6-ins. piston-rod, using ordinary packing.

Upon what would you base your calculations for the size of the stuffing box?

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2. Sketch the large end of a connecting rod, shewing adjustments, oiling facilities, connection between butt and strap, etc.

3. Sketch an air-pump and explain its use. Does a jet or surface condenser require the largest air-pump? Why?

State the use of "foot-valves," bucket-valves, head-valves, "air-valves" and "pet-valves" in connection with an air-pump.

4. Describe in detail the construction of surface and jet condensers, and compare their relative efficiencies.

5. What is the object of the governor of an engine? Give sketches of the mechanism commonly connected with governors, and also describe some approved method of driving, giving reasons for the method selected.

6. What advantage is gained by connecting a condenser with a steam-engine?

7. Explain an arrangement of accumulator and necessary pumps for conveying power to the hydraulic machinery of a shop.

B. Boilers.

8. Give thickness of plating for the barrel and ends of a 7-ft. boiler, the steam pr. being 85 lbs. abs.

(The plates to be of steel with an ultimate tenacity of 65,000-lbs. per sq.-in.)

9. Sketch (*a*) a double-riveted lap joint suitable for moderate pressures, say 85-lbs. per sq.-in. abs., the plates being $\frac{3}{8}$-in. thick, (*b*) a single rivetted lap joint to replace the former.

10. Give an outline sketch of a Lancashire boiler in a brick setting, shewing suitable arrangement of flues, etc.

11. Sketch and explain the use of an expansive joint in connection with lengths of steam-piping.

12. Give the grate-area and heating surface of a Lancashire boiler which is to evaporate 30 cub. ft. of water per hour, assuming an average coal consumption and an average pressure.

13. Determine the approximate weight of a boiler 7 ft. in diar., 28 ft. long, with two internal flues 2 ft. 6-ins. inside diar.

(Boiler plate $\frac{3}{8}$-in. thick, ends $\frac{1}{2}$-in., internal tubes $\frac{1}{4}$-in.)

C. Cranes.

14. Describe, with sketches, an approved method of constructing the mast, jib, brace, suspension rod and bridge as employed in crane-frames, and explain their several uses.

15. What are the principal points which govern the design of the hoisting-gear of a frame ?

16. Explain, with sketch, the arrangement and action of friction plates as used in friction clutches.

SECOND, THIRD AND FOURTH YEARS.

ESSAY.

TUESDAY, 5TH APRIL ;—9 A.M. TO 12 A.M.

Examiners, ... { HENRY T. BOVEY, M.A., M. INST. C.E. / B. J. HARRINGTON, B.A., PH.D. / C. H. MCLEOD, M.A.E., M. C. INST. C.E.

Write an essay on *one* of the following subjects :—

FOURTH YEAR.

1. Flow of water through mouth-pieces.
2. The measurement of base-lines for geodetic surveys.
3. The slide-valve.
4. Retaining walls.

THIRD YEAR.

5. Destructive distillation of wood.
6. Brakes.
7. Effect of repeated stresses upon structural materials.
8. Retaining walls.
9. Ventilation of mines.
10. Rivetted joints.

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11. The basic method of manufacturing steel.
12. The manufacture, uses and valuation of bleaching powder.
13. Toothed gearing.

THIRD YEAR.

MACHINERY AND MILL WORK.

TUESDAY, APRIL 12TH, 1887 :—MORNING, 9 A.M.

Examiner, ... HENRY T. BOVEY, M.A , M. INST. C.E., &c.

1. What is a *slider-crank chain* ? Discuss the effect of fixing the *connecting*-link.

2. In a beam engine the radius of the beam = 12½-ft., the stroke of piston = 5-ft., of air-pump = 3-ft.; the front and back links of

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the parallel motion = 2½-ft.; find the proper length of the radius-rod, and the point in the back-link where the air-pump rod should be attached.

3. Shew that the relation between the tight (T_1) and slack (T_2) tensions of a belt passing over a pulley and travelling at the rate of v-ft. per sec. is

$$T_1 - T_2 . e^{f\theta} = \frac{v^2}{g} \cdot w \left(1 - e^{f\theta}\right),$$

θ being the angle subtended at the centre of the pulley by the arc of contact, f the coeff. of friction, and w the weight of a unit of length of the belt.

Find the speed for which the work transmitted shall be a maximum, and shew that the ratio of the corresponding tensions is

$$\frac{3.e^{f.\theta}}{1 + 2\,e^{f.\theta}}$$

4. A circular saw makes 1,000-revols. per min., and is driven by a belt 3-ins. wide and ⅛-in. thick, its weight per cub.-in. being .0325-lbs. The belt passes over a 10-in. pulley, embracing one-half the circumference and transmits 6 H P. Find the tight and slack tensions, the coeff. of friction being .28.

5. What is a dynamometer? Classify the different kinds of dynamometer.

6. Describe the friction brake used for measuring work.

7. A uniform shaft of length l and specific weight w, transmits work; shew that its efficiency is,

$$1 - 2\,w \frac{f}{s} - l$$

being the coeff. of friction and s the safe stress in the metal.

A steel shaft weighing 490-lbs. per cub. ft. makes 100-revols. per min.; if the working stress in the metal is 11,200-lbs. per sq. in., find the twisting couple and the distance to which the work can be transmitted, the coeff. of friction being .05, and the efficiency of the shaft ¾.

8. Shew how to determine the efficiency of an endless belt, and apply to the belt in Question 4, which embraces two pulleys of equal diar.

9. In a four-link chain abcd, with two links ab, dc, turning about fixed centres a and d, shew that the angular velocities of these links are inversely proportional to the distances of the point of intersection of bc and ad produced, from the centres a and d.

10. Assuming that the normal wear of a conical pivot is proportional to sin α, 2α being the angle of the cone, determine the total moment of friction and the work absorbed by friction per revolution.

Apply to the case of a pivot 3-ins. long and carrying 6-tons, its upper face being 6-ins. in diar. (coeff. of fin. = .04, and $2\alpha = 90°$).

11. What precautions would you take to prevent the undue heating of a journal? The pressure upon a 4-in. journal making 50-revols. per min. is 6-tons, the coeff. of friction being .05; find the number of units of heat generated per sec., Joule's mechl. equivalent of heat being 772-ft. lbs.

12. Define centrifugal force.

A 60-ins. driving wheel weighs $3\frac{1}{2}$-tons, and its C of G is 1-in. out of centre; find the greatest and least pressure on the rails.

FACULTY OF APPLIED SCIENCE.

THIRD YEAR (*Advanced Course*).

THEORY OF STRUCTURES.

SATURDAY, APRIL 16TH, 1887:—MORNING, 9 A.M.

Examiner,.....HENRY T. EOVEY, M.A., M. INST. C.E.

1. A girder is absolutely fixed at one end, and supported at the other the intensity of the load at any point being directly proportional to the distance from the latter; determine the max. deflection of the girder.

Ex. l = 30-ft., $w = 62\frac{1}{2}x$.

2. Shew that the work done in bending a beam is

$$\frac{1}{2}\int \frac{M^2}{E.I.}.dx$$

the integration extending over the length under consideration. A continuous beam of two spans each = l, and of uniform sectional area, carries

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a uniformly distributed load of intensity w, shew that the work done in bending the whole beam

$$\frac{w^2 l^5}{320. E.I.}$$

Also show that the centre must be raised a height $\frac{wl^4}{8E.I.}$ in order that the ends may *just* rest on the supports.

3. In a cast-iron beam of I-section and of uniform strength, the compressive working stress being 3-times the working tensile stress, the thickness of the web is assumed to be a certain fraction of the depth. Determine the ratio of bottom flange, web and top flange which will secure the *max.* economy of material, and find the moment of resistance of the section.

4. A cantilever of homogeneous material and whose transverse section is an equilateral triangle bends under its own weight; find the max. deflection, and the work done in bending. (A face of the beam to be uppermost and horizontal.)

5. Enunciate the theorem of three moments for the case in which the spans are loaded with arbitrarily distributed loads.

With the loading as on the accompanying diagram, place the locomotives so as to give a max. B. M. at the centre support of two 50-ft. spans of a continuous girder.

6. Design an iron joint 20-ft. long with equal flange areas and a web area equal to the joint area of the flanges, which is to carry 320-sq. ft. of flooring, so that the greatest deflection when the load on the floor is 240-lbs. per sq. ft. may not exceed $\frac{1}{2}$-in.

7. Shew that the minimum pressure that will bend a strut of length laterally, both ends of the strut being fixed, is $4 E I \frac{\pi^2}{l^2}$.

THIRD YEAR AND B.A. Sc.

THEORY OF STRUCTURES. (*Paper I.*)

FRIDAY, APRIL 1ST, 1887:—MORNING, 9 A.M.

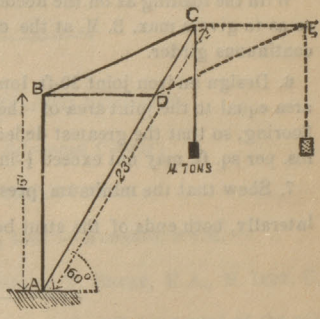
Examiners..... { HENRY T. BOVEY, M. A., M. INST. C.E.
P. A. PETERSON, M. Inst. C. E., Chief Eng'r. C. P. Ry.

1. In Fig. 1 on the diagram, m n p g r.....is the force polygon of the system of forces 1, 2, 3, 4.....and abc.....in Fig. 2 is its reciprocal. Shew that the point g in which the first and last lines of the reciprocal meet is a point on the *actual* resultant of the forces.

A beam AB inclined at 60° to the vertical is acted upon by the following external forces; by forces of $1\frac{1}{2}$, 3 and $1\frac{1}{2}$ tons perpendicular to its direction at A, the middle point C, and B, respectively, and by vertical forces of $\frac{1}{2}$, 1 and $\frac{1}{2}$-ton, at the same point... ...aw the force polygon and its reciprocal, and find the point c ...sponding to g in the above.

2. Three wheels loaded in *order* with 8, 9, and 10-tons, and spaced 5-ft. apart, are placed upon a beam of 15-ft. span, the 8-ton wheel being 3-ft. from the left abutment; determine *graphically* the B. M. at the centre of the beam. Also find the greatest B M that can be produced *at the same point*, when the wheels travel over the beam. Finally, find the absolute max. B. M. to which the beam is subjected and the position of the section at which it occurs.

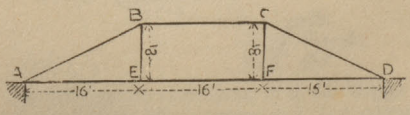
3. Find the thrust on the jib, the tension on the tie, and the B.M. at the foot of the post in the crane ABC when lifting a weight of 4-tons.



In order to increase the throw, the crane is modified in the manner shewn by the dotted lines, B DEC being a parallelogram, and CE horizontal; find the stresses in the different members of the crane as thus modified.

In the latter case, if the chain (which is in 4-falls) passes from E to B and then down the post, explain the effect upon the stresses in the members EC and ED.

4. The Fig. is the skeleton diagram of a truss for a roof of 48-ft. span; the depth of the truss is 8 ft.; the weight of the roof covering is equivalent to a load of 120 lbs. per lineal ft. on the members A B, B C, C D; a single load of 640 lbs. is concentrated at the middle point of C D; draw *to scale* the stress diagram

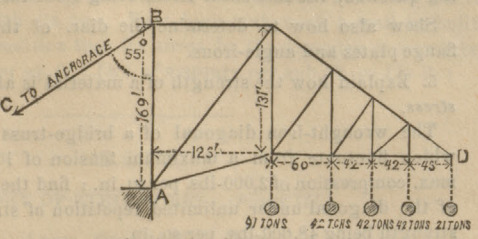


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Shew how the stresses are modified by the introduction of struts from the feet of the queens to the middle points of the members A B, C D.

5. In the second case of Question 4, if the force of the wind exerts a normal pressure of 100-lbs. per lineal ft. upon the member A B, shew how the truss should be strengthened, and draw *to scale* the stress diagram. It may be assumed that *one-half* the horizontal reaction is borne at A and one-half at D.

6. The Fig. is the skeleton diagram of a cantilever for a viaduct in India; determine *graphically*, the stresses in the various members under the loading indicated.



THEORY OF STRUCTURES. (*Paper II.*)

MONDAY, 4TH APRIL, 1887:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M. INST. C.E.

1. If a body rotates about an axis with a given angular velocity A, show that its total kinetic energy is $\frac{1}{2}$ .A^2 .I, I being the moment of inertia of the body with respect to the axis.

If the earth be assumed spherical, how much heat would be developed if its axial rotation were suddenly stopped, a unit of heat corresponding to 772 ft. lbs.? (wt. of mass of earth $= 10^{21} \times 6.029$-tons; diar. of earth $=$ 8000 miles).

2. Explain the meaning of the terms *bending-moment* and *shearing-force*.

A beam of 24 ft. span is fixed at both ends and hinged at the centre with a hinge capable of bearing a bending moment of 18 ft. tons.

Draw *to scale* curves of bending moment and shearing force when the beam carries (*a*) a uniformly distributed load of 24 tons, (*b*) a single load of 12 tons at the centre, (*c*) a load of 9 tons at each of the points of trisection.

3. Clearly state the assumptions involved in the relations,

$$M = \frac{E}{R} .I = \frac{f}{c} .I$$

and prove that the neutral axis passes through the C. of G. of the section.

Determine the moment of resistance of a double-flanged wrought-iron girder, each flange being a plate 6-in. wide and $\frac{3}{8}$-in. thick, united to a web 20-in. deep and $\frac{1}{2}$ in. thick, by two angle-irons, each $2\frac{3}{4}$-in. $\times$ $2\frac{3}{4}$-in. $\times$ $\frac{1}{2}$-in.; safe stress$=$ 8,000-lbs. per sq. in.: also examine the weakening effect of two $\frac{3}{4}$-ins. rivet holes in the bottom flange.

4. Compare the maximum and average intensities of shear, and find the working resistance to shear in the case of the girder section in the preceding question, the safe shear stress being 6,000-lbs. per sq. in.

Shew also how to determine the diar. of the rivets connecting the flange plates and angle-irons.

5. Explain how the strength of a material is affected by a *fluctuation* of *stress*.

The wrought-iron diagonal of a bridge-truss is subjected to stresses which fluctuate from a maximum tension of 10,000-lbs. per sq. in. to a max. compression of 2,000-lbs. per sq. in.; find the actual ultimate strength of the diagonal under unlimited repetition of stress, the ultimate tensile strength being 48,000-lbs. per sq. in.

6. Shew that a long pillar hinged at both ends becomes unstable when the load $= \dfrac{8\,E\,I}{l^2}$, approx.

A hollow cast-iron column hinged at both ends is 24-ft. high and has a mean diar. of 6-in.; it carries a load of 80-tons; find the proper thickness of the metal, 10 being a factor of safety ($a = \frac{1}{6}\frac{1}{0}\frac{0}{0}, f = 80{,}000$ lbs.). Also find the deviation of the load from the axis of the column, so that the max. stress in the metal may not exceed 10,000 lbs. per. sq. in.

7. Deduce a formula connecting the web and flange areas of a cast-iron beam of double-tee section, the tensile and compressive strengths being in the ratio of 2 to 5, and point out any errors involved in your method.

8. Shew that a *hollow* shaft is both stiffer and stronger than a *solid* shaft of the same weight and length.

9. The working stress in a steel shaft acted upon by a twisting moment of 224,000 inch lbs. is not to exceed 11,200-lbs. per sq. in.; find its diar., also find the diar. of a steel shaft which will transmit 5,000 H.P. at 66 revols. per min., μ being $\frac{3}{2}$.

10. A steel boiler 8 ft. in diar. has $\frac{1}{2}$ in. plates with double rivetted joints, find the safe steam-pressure, the stress in the plates not exceeding 6,400 lbs. per sq.-in.

11. A shaft is subjected to a bending moment M_b and a twisting couple M_t, show that the max. direct stress on the metal is $\frac{2}{\pi r^3}\{M_b + \sqrt{M^2_b + M^2_t}\}$, and that the maximum shear is $\frac{2}{\pi r^3}\sqrt{M^2_b + M^2_t}$, r being the radius of the shaft.

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12. t is the thickness of the horizontal bed of a wall; R is the total pressure upon the bed per unit of breadth; x is the distance from the centre of resistance of the bed to the most compressed edge; f is the greatest intensity of pressure on the bed; shew that f is equal to

$$\frac{2}{3}\frac{R}{x} \text{ or } \frac{2.R}{t}\left(2-\frac{3.x}{t}\right) \text{ according as } x < \text{ or } > \frac{t}{3}.$$

A wall of an isosceles triangular section, with a base 36 ft. wide, has to retain water level with its top. How high may such a wall be built, consistent with the condition that the stress in the masonry is nowhere to exceed 12,000 lbs. per sq. ft.? (wt. of masonry per cub. ft. = 120-lb.)

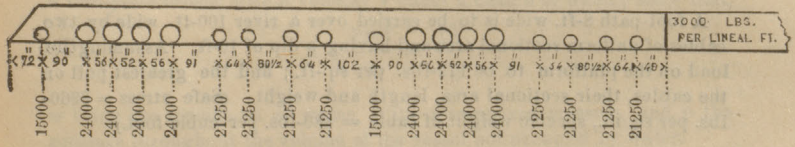
B.A. Sc.

THEORY OF STRUCTURES. (*Paper III.*)

WEDNESDAY, APRIL 6TH, 1887:—MORNING, 9 A.M.

Examiners,.... { HENRY T. BOVEY, M.A., M. INST. C.E.
P. A. PETERSON, M. INST. C.E., CF. ENGR. C.P.Ry.

1.



Two coupled locomotives and train of cars.

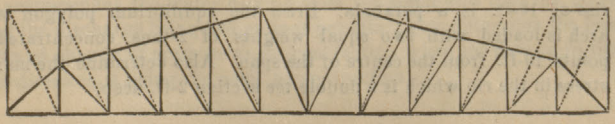
With the above loading design a floor beam for a single-track bridge, 22-ft. panels; platform 450-lbs. per sq. ft., longitudinal 200 lbs. per lineal yard.

Also design a longitudinal.

2. Describe in detail the process of determining the stresses in the various members of a double-intersection lattice girder.

3. Sketch a timber roof suitable for a span of 60-ft.; and determine the stresses in the various members, under an assumed roof load of 75-lbs. per sq. ft. the trusses being 15-ft. centre to centre.

4.



Discuss the relative advantages of straight and sloping upper chords, as shewn in accompanying diagram. Ex.-12 panels each 20-ft. long, depth of centre vertical = 40-ft., of end vertical = 20-ft.

5. 

The Fig. represents an hydraulic crane: the load may travel along the lower chord. Determine the stresses in the various members, when the load is half-way between C and D.

B.A. Sc.

THEORY OF STRUCTURES. (*Paper IV*).

THURSDAY, APRIL 7TH, 1887:—MORNING, 9 A.M.

Examiner,..... .....HENRY T. BOVEY, M.A., M. INST. C.E.

1. A bridge platform is suspended from cables by vertical rods; if the load is uniformly distributed per horizontal unit of length, shew that the curve in which a cable hangs is a parabola, and find its parameter, its approximate length, and the tension at any point.

A foot-path 8-ft. wide is to be carried over a river 100-ft wide by two cables of uniform sectional area and having a dip of 10-ft. Assuming the load on the platform to be 112-lbs. per sq.-ft.; find the greatest pull on the cables, their sectional area, length and weight. (Safe stress = 8960-lbs. per sq. in., specific weight of cable = 480-lbs. per cubic foot.)

2. Find the depression of the cables in the last question due to an increment of length under a change of 60° F. from the mean temperature

$$\left(\text{co-eff. of expansion} = \frac{1}{414000}\right)$$

3. Explain the object of a stiffening truss.

Each side of the platform of a suspension bridge for a span of 100-ft. is carried by 9 equidistant suspenders; design a stiffening truss for a live load of 1000-lbs. per lineal ft., and determine the pull upon the suspenders when the load produces (1) an *abs. max.* shear (2) an *abs. max.* B.M.

4. Shew how to determine the B.M. at any point of an arched rib.

The axis of an arched rib hinged at both ends, for a span of 50-ft. and a rise of 10-ft. is a parabola. Draw the equilibrium polygon when the arch is loaded with two equal weights of 2-tons, concentrated at two points, 10-ft. from the centre of the span. Also determine the max. flange stress in the rib which is a double-tee section 2-ft. deep.

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If the arch is loaded so as to produce a stress of 10,000 lbs. per sq.-in. on the metal, shew that the rib will deflect .029-ft. (E = 25,000,000 lbs.)

5. Explain the use of the transformed catenary. Determine the transformed catenary for an arch of 60-ft. span and 15-ft. rise, the masonry rising 6-ft. over the crown, and weighing 120-lbs. per cubic-ft.; also find the amount and direction of the thrust at the abutments.

6. Distinguish between "*curve of pressures*" and "*curve of centres of pressure*," in arches, and determine the condition under which these two curves may be coincident.

B.A. Sc. EXAMINATION.

HYDRAULICS. (*Paper I*).

THURSDAY, 14TH APRIL, 1887:—MORNING, 9 A.M.

Examiner,..... ...HENRY T. BOVEY, M.A., M.INST.C.E.

1. Explain what is meant by "flow through an orifice in a thin plate."

A jet of water issues into the atmosphere from a closed vessel through a thin-plate orifice, with a velocity v under a head h of water; shew that,

$$h + \frac{p-P}{w} = \frac{v^2}{2g}$$

w being the specific wt of water, P the atmosphere pressure, and p the pressure throughout the volume of the vessel not occupied by water.

The steam-pr in a boiler is 70-lbs. per sq.-in.; find the discharge through an orifice $\frac{1}{4}$ sq.-in. in area, made 6-ins. below the water surface, choosing a suitable coeff. of discharge.

2. Obtain an expression for the time occupied in filling a canal lock.

The horizontal section of a canal is a rectangle; its length = 270-ft., its bottom width = 45-ft.; the side walls have a batter of 1 in. 12; the sluice openings have an area of 20-sq. ft., and their common centre line is 20-ft. below the level of the upper reach; the lift is 9-ft.; find the time of filling the lock.

3. A pipe of 9 sq.-ins. sectional area is suddenly enlarged to one of 18 sq.-ins.; find the total loss of head and the gain of pressure head at the sudden enlargement the water flowing from the small pipe into the large one, and the discharge being 200 gallons per min.; also determine the loss of head and change of pressure at the contraction when the flow is in the opposite direction, $\frac{2}{3}$ being the coeff. of contraction.

4. Determine the discharge through a cylindrical mouth-piece. Assuming the coeff. of discharge = .82, find the coeff. of velocity. Also determine the pressure head at the contracted section.

5. If Q be the discharge over a "drowned" weir, h the difference of level between the head and tail water, h_2 the head of water above the weircrest, and H the head due to the velocity of approach, shew that

$$Q = c.\ l.\ \sqrt{2.\ g}\left\{(h_2 + H)\ (h + H)^{\frac{1}{2}} - \tfrac{1}{3}\ (h + H)^{\frac{3}{2}} - \tfrac{2}{3}.\ H^{\frac{3}{2}}\right\}$$

How would you make allowance for end contractions? What should be the height of a drowned weir 400-ft. long, with a 12-ins. depth of water over its crest, to deepen the water on the up-stream side by 50 per cent. the section of the steam being 400 ft. x 8-ft., and the velocity of approach 3-ft. per sec.?

6. Water flows steadily in a pipe of uniform section, obtain an expression giving the frictional loss of head, and clearly state all the assumptions you make.

A tank of 1000 gallons capacity is 100-ft. above the level of the main, and is connected with it by a service pipe 200-ft. long and 1-ft. in diar. Find the time occupied in filling the tank, the head in the main being 120-ft.; also find the *work done*.

7. How far can 50 H P be transmitted in a 4-in. pipe, with a loss not exceeding 10 H P, the coeff. of pipe friction being .0075, and the pressure of the water 750-lbs. per sq. in.?

8. A line of horizontal piping consists of two lengths, each equal to 1000-ft. The diar. of the first length is 4-ins. and of the second, 6-ins.; the discharge is 77 cubic ft. per minute. Find the length of an "equivalent pipe," and draw to scale the plane of charge.

9. The section of an open channel is a regular trapezoid with sides sloping at 45°. The sectional area of the water-way is 1000-sq. ft., and the longitudinal fall is 1 in 3000; find the transverse dimensions which will give a maximum discharge, and the amount of such discharge.

10. A branched pipe connects three reservoirs, in which the heads of water are h_1, h_2, h_3 the corresponding discharges being Q_1 Q_2, Q_3. Assuming that the cost of the main laid in situ is to be a minimum, show that

$$\frac{Q_1}{V_1^3} = \pm \frac{Q_2}{V_2^3} + \frac{Q_3}{V_3^3}$$

If the middle reservoir is cut off, and a valve introduced at the lowest point of the pipe connecting the highest and lowest reservoirs, explain the effect upon the flow when the valve is gradually opened.

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HYDRAULICS. (*Paper II*).

THURSDAY, 14TH APRIL, 1887:—AFTERNOON, 2 P.M.

Examiner,.....HENRY T. BOVEY, M.A., M. INST.C.E.

1. A jet of water moving in the direction A B with a velocity v, mpinges upon the lip B of a vane moving with a velocity $\frac{v}{2}$ in the direction B D, the angle A B D being 165° ; determine the form of the vane at B so that the water might rise on it "without shock at entrance."

2. A ship is propelled at the rate v-ft. per sec. by means of a jet projected sternwards from the ship with a velocity u relatively to the ship. If A is the sectional area of the jet, determine the total work done on the water, and shew that the efficiency of the propeller is $\frac{2v}{u+v}$.

3. Point out the distinctive features of a Poncelet undershot-wheel.

Assuming that there is to be no shock at entrance, and that the water enters the wheels with a velocity v, at an angle of 15° with the tangent to the wheel's periphery, determine the speed (u) of the wheel in terms of v, which will give a max. efficiency and find its value.

4. Shew how to determine the mechanical effect of a breast wheel.

Ex. Q = 10 c-ft. per sec., H = 10-ft.; $v_1 = \frac{8}{5}u$; u = $4\frac{1}{4}$-ft. per sec.; $\gamma = 30°$; diar. of gudgeon = 6-ins.; diar. of wheel = 30-ft.; f = .08; wt. of wheel and water = 20,000-lbs. (Neglect loss of effect due to escape of water from buckets, and to frictional resistance along the curb.)

5. Shew that in an overshot wheel it is advantageous to increase the mechanical effect due to weight, and diminish that due to impact, as much as possible.

6. In an overshot wheel shew how to find the points where spilling commences and ends.

Ex. A wheel of 30-ft. diar. with 72-buckets makes 7 revols. per min., Q being 5 cub.-ft. per sec.; the division circle is half way between the outer and inner peripheries.

7. Describe the construction of parallel-flow turbine, and shew how to determine its efficiency.

B.A. Sc.

HEAT AND HEAT ENGINES. (*Paper I.*)

TUESDAY, 19TH APRIL, 1887:—MORNING, 9 A.M.

Examiner,.....HENRY T. BOVEY, M.A., M. INST. C.E

1. Define the co-efficient of linear expansion and the co-efficient of cubical expansion. Shew that the latter is approximately 3 times the former

In a compensating pendulum a long central iron rod supports upon a flange, at the lower end, a zinc tube, on the top of which rests the bob. The distance between the bob and point of suspension is always to be 3-ft.; find the lengths of the rod and tube at O° C. (co-effs. of expansion =.00003389 for zinc, and =.00001125 for iron.)

2. Enuniciate the "gaseous" laws.

Air in a cylinder 24-ins. × 6-ins. diar. at 10° C is compressed into a cylinder 24-ins. × 3-ins. diar., and the temperature is raised to 35° C. Compare the pressures of the air in the two cases, and find the work done in the process.

3. Explain the meaning of the terms "specfic heat," "heat of evaporation," "latent heat," "total heat."

To each 1-lb. of steam at 100° C. entering the condenser, 20-lbs. of water at 12° C are pumped into the condenser. The temperature in the boiler is 160° C. Find (*a*) the temperature of the water in the condenser (*b*) the mean specific heat of the water between the temperature of the condenser and that of the boiler, (*c*) the heat of evaporation.

4 Shew that in any reversible engine the efficiency is a maximum and $= \frac{W}{H}$, W being the work done when a quantity of heat H is abstracted from the source, both being estimated in dynamical measure.

A 10 H. P. engine works between a boiler temperature of 150° C and a temperature of 61° C in the condenser. If the engine is assumed reversible, find the heat converted into work and the heat given out to the condenser per hour.

5. If P_1 is the initial steam pr., P_3 the back pr., and $P.V^n = C$, the law of expansion, shew that the *useful* work per stroke

$$\frac{P_1 V_1}{n-1}\left\{1 - \left(\frac{V_1}{V_2}\right)^{n-1}\right\} - P_3 . V_2$$

Deduce the useful work per lb. of steam.

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6. What is meant by *dry saturated steam?* What by *superheated steam?* Which gives the greatest economy in steam-engine practice, the cylinder in the latter case being non-conducting? Why?

7. Write down a formula giving the pressure corresponding to the temperature of a boiling point.

In practice the 10 H. P. engine in question 4 has a rate of expansion = 4, and makes 50 revols. per min.; find the volume of the cylinder in cub.-ft.

Also determine the mechanical efficiency of the engine and compare it with that of the perfect engine (law of expansion $p.v^{\frac{17}{16}}$ = a const).

8. What considerations govern the amount of clearance and compression advisable in an engine.

If the clearance in question 7 is one-twentieth of the stroke, what will be the true rate of expansion? How will the "work-done" be affected?

9. Explain the process of "fixing the indicator" for the purpose of indicating an engine.

Explain and shew by carefully drawn lines how the accompanying theoretic diagram will be modified (*a*) for the engine of question 7, (*b*) when the slide-rod is too short, (*c*) when the slide-rod is too long, (*d*) when the steam is throttled.

10. Find the work done in one stroke of a compound engine in which one piston passes through the high and low pressure cylrs., when rate of expansion in the high pressure cylr. is r, the steam expanding adiabatically.

Ex. $p_1 = 3\frac{1}{2}$ atms., $p_3 = \frac{1}{8}$ atms., stroke = 50-ins.; diar. of high pr. cylr. = 18-ins., of low pr. = 30-ins.

EXAMINATION FOR B. A. APPLIED SCIENCE.

HEAT AND HEAT ENGINES. (*Paper II.*)

TUESDAY, 19TH APRIL, 1887:—AFTERNOON, 2 P.M.

Examiner,..... ..... HENRY T. BOVEY, M.A., M. INST.C.E.

1. Describe an equilibrium valve, and explain its principle.

2. Sketch the section of a cylinder for a horizontal steam-engine, shewing the ordinary D slide valve and also an expansion valve.

3. Prove that the distance between the centres of the two valves in the preceding question for any position of the crank is the intercept of the radius in that direction by the space-circle.

The eccentricity of the D-valve = 3½-ins., of the expansion valve 4-ins.; the ports are 3-ins. wide; the angle of advance = 30°; the lead = ⅛-in.; range of compression = ¼ stroke; the eccentric radius of expn. valve makes an angle of 30° with the line of stroke when crank-pin is at a dead point: find the point of cut-off; the steam and exhaust laps, the max. distance between the valve centres; and trace the motion throughout one revolution.

4. Describe the construction of a flywheel of large diameter.

Shew how to determine fluctuation of energy during one revolution.

5. Explain the action of a common pendulum governor. What advantage is gained by loading the governor?

The balls of a governor of each weigh 6-lbs., and the load on the slider is twice that of the balls; find the height corresponding to a speed of 200 revols. per min. Also find the tendency to move the regulating apparatus when the speed is altered 1 per cent. How much is the tendency increased by the load on the slider?

6. Point out the respective merits of jet and surface condensers.

7. Describe in detail a piston, explaining how it is fitted, packed, etc., and shew by a sketch the manner in which it is connected with the piston-rod.

EXAMINATION FOR B.A. Sc.

DESIGNS

(*A specification and estimate are required with each design*).

Examiners,..... { Henry T. Bovey, M.A., M. Inst.C.E.
John Kennedy, M. Inst. C.E.
P. A. Peterson, M. Inst. C.E.

1. (*a*) A double-intersection Pratt truss bridge of 180-ft. span, with a double track.

(*b*) A lean-to movable freight shed of 60-ft. span, for the Montreal wharves.

2. (*a*) A canal lock 300-ft. long by 45-ft. wide, with a max. depth of 16-ft. of water on the floor, and a lift of 12-ft.

(*b*) A roof of 60-ft. span, the rafters being of unequal length.

3. (*a*) A river landing pier, the platform being carried on trusses swung from trestles 30-ft. apart.

(*b*) A graving dock 500-ft. long with a 60-ft. entrance.

4. (*a*) A combination roof of 100-ft. span.

(*b*) A high-road Howetruss bridge of 100-ft. span.

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5. (*a*) An iron roof of 50-ft. span.

(*b*) A single-track bridge with main trusses of the Warren girder type.

6. (*a*) A double-intersection Pratt-truss bridge of 100-ft. span, for a single track.

(*b*) A combination roof of 100-ft. span.

7. General Distribution of Buildings for Coal Mine with Details of Shaft, Appliances for Screening, etc.

8. General Distribution of Buildings for Copper Mine with Details of Stamping Machinery.

MATERIALS (IRON STEEL).

MONDAY, 11TH APRIL :—MORNING, 9 A.M.

Examiners,... { HENRY T. BOVEY, M.A., M. INST. C.E.
JOHN KENNEDY, M. INST. C.E., Chf. Engr. Montl. Harb. Wks.

1. Describe a foundry cupola for cast-iron.

2. State the physical characteristics of cast-iron, wrought-iron and steel, with special reference to their use for structural purposes, and point out in what respect they differ from each other chemically.

3. Describe the processes of making machinery castings (of iron or steel), and explain what precautions you would take to prevent any straining of the metal while cooling, which might result from unequal thickness.

4. Enumerate the impurities found in cast-iron, and state how they severally affect its quality.

5. Describe a puddling furnace and the process of puddling.

6. Explain what is meant by "cold-short iron, hot-short iron," "fatigue of iron," "hardening," "tempering," "blazing," "annealing," "case-hardening."

7. Briefly describe the Bessemer and Siemens processes of manufacturing steel, and compare their relative merits.

8. What is tool-steel? How is it made? What are its uses?

9. Give a description of the Bower-Barff method of preventing the corrosion of iron.

10. Write out specifications for (*a*) the painting of the iron-work of a bridge, (*b*) a warehouse cast-iron floor girder, (*c*) a steel Lancashire boiler, (*d*) the diagonals and chords of a bridge truss, (*e*) water pipes.

11. Classify the specimens on the table, and state their respective characteristics.

EXAMINATION FOR THE DEGREE OF MASTER OF ENGINEERING.

CANAL AND RIVER ENGINEERING. (*Practical.*)

MONDAY, 21ST MARCH:—MORNING, 9 A.M.

Examiners,..... ..... { HENRY T. BOVEY, M.A., M.INST.C.E.
JOHN KENNEDY, M. INST., C.E., Chief Engineer Montreal Harbour Works.

1. Briefly describe the method of making a hydrographic survey: (*a*) for rivers of moderate width (say 440 yds.) with swift currents and rapids, (*b*) for great rivers, (*c*) for tidal estuaries.

2. Describe the more approved methods of gauging, (*a*) mill-powers in which frequent and accurate measurements are necessary, (*b*) large rivers liable to be covered with ice, (*c*) tervential streams.

3. Discuss the scouring action of rivers in reference, (*a*) to the movement and deposition of solid matter, (*b*) to the formation of bends, (*c*) to the most approved method (or methods) of preventing scour (including rectification of channels), and of utilizing the scour for deepening the channel.

4. Describe the construction of some jetty with which you are acquainted, specifying the object of its use.

5. How would you construct (*a*) a submerged dam, (*b*) a moveable weir, for regulating the depth of rivers of moderate size.

6. State the considerations which govern the selection of a site for a ship or steamboat channel in large rivers, e.g., the St. Lawrence.

7. Sketch a cross-section of the wall of a canal lock-chamber, and explain in detail the points which influence you in your design.

8. Describe one of the most approved methods of filling and emptying large lock-chambers.

9. Give your reasons for the choice of timber or iron gates for the larger Canadian canals.

EXAMINATION FOR THE DEGREE OF MASTER OF ENGINEERING.

CANAL AND RIVER ENGINEERING. (*Theoretical*).

TUESDAY, 22ND MARCH:—MORNING, 9 A.M.

Examiners,..... { HENRY T. BOVEY, M.A., M. INST. C.E.
JOHN KENNEDY, M. INST., C.E., Chief-Engineer Montreal Harbour Works.

1. State the laws of fluid friction, and write down a formula giving the resistance offered to the motion of a submerged plane surface in a current of water.

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A caisson having a transverse submerged section of 780 sq.-ft. is to be hauled at the rate of 3 miles, an hour against a current running 6 miles per hour; determine the requisite horse-power (coeff. of fn. = .0025).

2. Water is discharged through a 1-in. cylindrical mouth-piece under a head of 30-ft.; find the discharge in gallons per minute and also the energy of the issuing jet.

3. Show how to determine the discharge through a pipe of given diar., under a given head.

The lengths of two pipes are the same, but the diar. of one is double that of the other; compare the discharges—(*a*) when the velocities of flow are the same, (*b*) when the losses of head by skin-friction are the same.

4. The head on a 6-in. pipe is that corresponding to a pressure of 750-lbs. per sq-in.; how much energy, measured in H. P., can be transmitted a distance of 5 miles, assuming that 25 per cent. of the head is lost in skin-friction (coeff. of fn. = .0075.)

5. A pipe discharging 110 gallons per min. suddenly enlarges to twice its diar., the flow being from the small pipe into the large one; find the total loss of head and the gain of pressure-head at the sudden enlargement. How would your results be affected if the flow were from the large pipe into the small one?

6. Show how to determine the discharge through a triangular notch, and point out any advantage in the use of such form for purposes of gauging.

7. A stream of regular trapezoidal section, 20-ft. wide at the top, 10-ft at the bottom, and 10-ft. deep discharges 300 cubic ft. per sec.; the depth of the water is to be raised to 12-ft. by a weir; find the height of weir, (*a*) neglecting the velocity of approach, (*b*) taking this velocity into account.

8. How do you determine the mean hydraulic depth of an open current? A river is 10,000 ft. wide at the surface, the sides slope at 45°; find the discharge for a fall of 1 in 3,000, f being .008; and compare your result with the discharge when the river is frozen over.

9. Give some method of determining the time of emptying or filling a canal lock-chamber. A canal lock-chamber with a superficial area of 3,500 sq. ft. has a lift of 6 ft.; the area of the two sluices is 12 sq. ft.; find the time of filling the chamber.

10. The following observations were made in gauging a brook for a mill-power; it was dammed up and an opening 24-in. wide by 6-in. deep made, the initial head being 24 ins.; the heads after intervals of 25, 50, 75, 100, 125 and 150 secs., were 1.8, 1.6, 1.4, 1.3, 1.2 and 1 ft.; the opening was then closed and the water had risen to its original head in 100-secs; find the mean velocity of efflux and the discharge.

11. The accompanying diagram represents a section of the St. Lawrence drawn to the scales indicated. The mean vely. of flow in the compartments a, b, c, d, e, f, g are .986, 2.68, 2.985, 2.95, 2.92, 2.826, 1.775 ft. per sec., respectively; find the discharge.

Also determine the fall of the river and the increased discharge: (*a*) when the river is covered with ice, (*b*) when a wind blows down the river with an effect equivalent to an increase in the wetted perimeter of 20 per cent. ($f = .008$.)

THESIS.

Examiner,.....HENRY T. BOVEY, M.A., INST. C.E.

A review and criticism of certain water-works, canal works, railways, land-surveys and explorations upon which the candidate had been engaged since the year 1876.

FIRST YEAR.

FREEHAND DRAWING.

SATURDAY, APRIL 2ND:—9 TO 12.

Examiner,.....C. H. MCLEOD

1. Drawing without models.

(*a*) A cube with pyramid on top, to the left of, and above level of spectator's eye.

(*b*) A Greek cross standing on a square platform of two steps. The object is below spectator's eye, and to the right of the same.

II. Drawing from models.

(*a*) The group of objects on tables.

(*b*) Shafting with pulleys, frame and belt.

(*c*) The ornament on the black-board.

SECOND YEAR.

DESCRIPTIVE GEOMETRY.

SATURDAY, APRIL 2ND, 1887:—MORNING, 9 TO 2.

Examiner,.....C. H. MCLEOD, MA.E.

1. Divide an angle of 60°, so that the sines of the parts will be to each other as 3 to 4.

2. Construct an ellipse whose axes are 2 in. and 3 in. in length. Find the tangent to the curve at any point not the end of an axis.

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3. Find the plan and elevation of a prism, the section of which is an equilateral triangle, when one face is at 30° to the horizontal and an edge of that face is at 45° to the vertical.

4. Show the projection, on a plane parallel to the axis, of a square threaded screw, which has been cut from a cylinder 2 ins. in diameter. There are two threads to the inch.

5. Show how to obtain the scale in Isometric projection, and prove the truth of the method.

6. Two roofs having each a pitch of 45° meet at right angles. Find the true value of the angles formed at the ridge.

7. There is a plane whose traces make angles of 30° and 45° with the horizontal. Find the traces of a second plane parallel to the first and one inch distant from it.

SECOND YEAR.

SURVEYING.

SATURDAY, APRIL 9TH, 1887:—MORNING, 9 TO 12.

Examiners, ... { C. H. McLEOD, MA.E. / W. J. SPROULE, B.A.SC.

1. By observing the angles subtended at your eye by three objects whose positions are known, you can determine your own position. State your opinion regarding a practical limit to the application of this method. If it has any theoretical exception, give the exception.

2. Give three methods of taking out the area of railway cross sections or other irregular figures on paper, and discuss their merits as to economy of time and correctness of the results obtained.

3. In fixing the positions of beacons, trees, buildings, etc., by triangulation in an ordinary topographical survey, what is the least size of apex angle you would depend on? What other circumstances affect the dependence to be placed on observations from a base, for the purpose of fixing an object?

4. Show why it is preferable to employ two mirrors in an optical-square. (*a*) How would you test the accuracy of such an instrument?

5. Given points *A* and *B* on opposite sides of a wood; explain how you would range the line *AB*.

6. Explain how you would test for the eccentricity of the pivot of a magnetic needle.

7. Explain the process of calculating the area of an angular survey by the method of latitude and departure. (*a*) Suppose the boundaries of the area do not coincide with the survey lines how do you proceed?

8. Show by sketch, a vernier reading to 20″ and set to read 30° 13′ 40″.

9. Explain the "peg" adjustment of the level, How would you make the necessary correction?

10. Make a set of level notes for setting out work at one station in cutting and two in filling. The gradient is 1 per 100. Slopes $1\frac{1}{2}$ to 1. Road-width 16 ft. The position of the instrument is to be changed once.

11. In measuring an angle with an engineer's transit, how would you proceed in order to eliminate the errors arising from imperfect graduation of the circle.

12. There are three lines *AB*, *BC*, *CD*; *BC* is 350 ft; the angle *ABC* 170° 5′ and *BCD* 165° 15′. It is required to unite *AB* and *CD* by a 4° curve. Find the length of the curve and the position of the tangent points.

SECOND AND THIRD YEARS.

MECHANICAL WORK.

MONDAY, APRIL 18TH :—MORNING, 9 TO 11 A.M.

Examiner,.....C. H. McLEOD, MA.E.

1. Taking the diameter of a rivet at $d = 1.2\sqrt{t}$, and the ratio $\frac{f_s}{f_t} = 1.3$, show that the theoretical overlap of a riveted joint is, $l = 1.05\sqrt{d} + \frac{d}{2}$

(*a*) Compare this theoretical value with the ordinary practical rule.

2. Show, by sketch, four methods of connecting *parallel* plates, and discuss the merits of each.

3. How is the Seller's screw thread formed?

4. Show, by sketch, a suitable connection between a stay-bolt and the flat surface of a tank.

5. What considerations modify the theoretical thickness of a cast iron water pipe?

6. The twisting moment in a shaft is 10,000 in. lbs. A coupling on it has a bolt—circle radius of 3 in. and there are six bolts. Calculate the diameter of the bolts for a safe value of $f_s = 9{,}000$.

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7. Show an approximate method of drawing cycloidal teeth by means of circular arcs.

8. Express the ratio between the axial, circumferential and normal pitch in screw gearing.

9. If the load on the teeth of spur-gearing is, $P = 0.046\ b\ p\ (4{,}000)$ and the safe stress in the rim may be taken at 2,000 lbs. per sq. in. Find the limiting safe velocity for iron wheels of ordinary proportions. The weight of iron is 0.28 lbs. per cubic inch.

AFTERNOON 2 TO 5.

10. In friction gearing between parallel shafts, a 20 in. wheel drives a 40 in. wheel. The driver makes 300 revolutions per minute, and the follower is to transmit 15 H. P. Make all the necessary designs and calculations.

11. Design a knuckle joint where the diameter of the rods is 2 in. Show that the parts are properly proportioned.

THIRD YEAR.

DESCRIPTIVE GEOMETRY.

SATURDAY, APRIL 2ND, 1887:—MORNING, 9 TO 12.

Examiner,.....C. H. McLEOD, MA.E.

1. There is a regular tetrahedron of 2 in. edge which has its three angular points 1 in. 1.5 in. and 2.2 in. respectively above the horizontal. Find the plan, and also the elevation on a plane not parallel to one of the edges of the solid.

2. The length of the common perpendicular to two lines is 0.5 in. and the angle between the projections of the lines on a plane parallel both is 45°. Project the solid formed by the revolution of one line about the other

3. A sphere of 2 in. diameter touches the axis of the hyperboloid in question (2) at point 1 in. distant from the throat. Find the projections of the line of penetration.

4. The scales along two of the axis in an axometric projection are $\frac{5}{6}$ and $\frac{4}{5}$; determine the scale along the other axis.

5. Find the shadow which is cast on the horizontal by the object in question (2) when the rays meet the vertical at an angle of 30° and the horizontal at 45°.

6. Find the perspective of a cone which stands on an octagonal plinth. One side of the plinth is parallel to the picture plane, and 5 ft. behind it, and the nearest edge of that side is 5 ft. on the left of the eye.

O

7. Find the perspective of a pentagonal pyramid, when one angle is in the foreground and 6 ft. on the right. One side of the base is to make an angle of 30° with the picture plane.

8. Find the perspective of the shadow which is cast by the object in question (7), or those in question (6). Direction of rays at pleasure.

9. Represent a globe of 3 in. diameter by L'Orgnas' method of map projection. Show meridians one hour distant and the 60° and 30° parallels.

NOTE:—*Civil Engineering* Students may omit question (3) and question 6 or 7. *Mechanical* Students may omit questions 6 or 7 and question 9. *Mining* Students may omit questions 5, 8 and 9.

THIRD YEAR.

SURVEYING.

SATURDAY, APRIL 9TH, 1887:—MORNING, 9 TO 12.

Examiners,..... { C. H. McLEOD, MA.E.
W. J. SPROULE, B.A.SC.

1. Explain how you would make a survey of a shoal at sea.

2. In what class of work is barometic levelling employed? (*a*) Sketch and explain the construction of an aneroid barometer.

3. What do you understand by "phase" of a station? (*a*) How does its character differ under different conditions, and what are the corrections due to it?

4. What are the sources of error in spirit levelling? Discuss these briefly, and explain how to conduct the work in a long and important line, in order to eliminate or minimize these errors.

5. The following measures of an angle were made: 50° 3′ 13.″5, 13.″2, 12″.8, 14.″2, 13.″3; what is the "probable error" of the arithmetical mean (*a*) What is the use of a knowledge of this quantity?

6. Give some account of the selection and measurement of a primary base line for a geodetic survey and the reduction thereof.

7. Describe fully how you would measure an angle in the primary triangulation of an extensive geodetic survey, using a "direction" instrument. (*a*) State the degree of accuracy with which its value should be known.

8. Obtain a formula for calculating the area of a portion of the sphere comprised between two meridians and two parallels.

9. Show how the co-efficients *A*, *B* and *C* in Mayer's formula for the reduction of transit observations vary in sign. (*a*) Obtain *A*.

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10. If you were an assistant in the Harbor office, Montreal, and were ordered to make a survey in summer of part of the shore of St. Helen's Island opposite the city. The survey is to include the water line and general topography of 500 feet of width along the shore, from the head of the island to the rapids between St. Helen's Island and Ile Ronde; also soundings over 100 feet of width along this shore, soundings to be about 25 feet apart. The object is to gain the requisite information for the proper location of a ferry wharf. You have at your disposal one trained assistant, one "handyman," boatmen and laborers, and all the instruments of a well equipped engineering office, and any materials you may desire. (*a*) For the land survey, (*b*) for the hydraulic survey:—What instruments, etc., would you take with you? What men? and what work would you assign to each? State concisely how you would conduct the operations. On what kind of paper would you plot the whole survey, and to what scale?

11. *a b h d e f* on the accompanying diagram is a line of railway staked out on the ground, *a b h* is a curve of 2865 feet radius, compounding into a curve *h d* of 955.4 feet radius, which terminates at *d* in the tangent *d e f*. The tangent lies well, also the curve *a b*, but it is desired to throw the line to the left on better ground between *h* and *d* by means of a curve of 1433 feet radius. The angle turned on the curve *h d* is 41°. What is the distance back from *h* to *b* the new point of compound curve, and state how you would revise the location on the ground.

B.A. Sc.

GEODESY AND PRACTICAL ASTRONOMY.

SATURDAY, MARCH 26TH, 1887,—9.30 a.m.

Examiner, ...C. H. McLEOD, MA.E.

1. Explain the measurement of the "error of runs" in the micrometer of an angular instrument.

2. The correction to the sidereal chronometer before you is + $1^m \cdot 33^s \cdot 5$. Find the correction to the mean-time chronometer for 75th meridian time. The longtitude is $4^h \cdot 54^m \cdot 18^s \cdot 54$.

3. Describe the making a set of observations of equal altitudes of the sun by the sextant.

4. Discuss the use of the transit instrument in the determination of clock corrections. Point out how best to secure the elimination of the instrumental errors, and obtain a general formula for the reduction of the observations.

5. Explain Talcott's method of finding the latitude by the zenith telescope, and show what corrections are required when the observations are made in the meridian.

6. Compare the length of one second of a meridian at a given latitude with the length of one second of the parallel at the same latitude.

7. Obtain a formula for the reduction of a difference of latitude on the spheroid, to the corresponding difference of latitude on the sphere, the radius of which is equal to the normal.

8. In the stereographic projection of a sphere, show that the projections of circles are, in general, circles. Describe a method of polyconic projection of maps.

9. How is the method of reciprocal zenith distances applied to the determination of terrestrial refraction?

10. Show how to calculate the sum of the angles of a triangle, and to distribute the errors of the observed values of the angles.

MECHANICAL ENGINEERING.

GEOMETRY OF MACHINERY.

SATURDAY, APRIL 9TH, 1887:—MORNING, 9 TO 12.

Examiner,.....C. H. McLEOD, MA.E.

1. When a 2 ft. crank makes an angle of 150° with a 6 ft. connecting rod, find the angular velocity ratio of the pieces. (*a*) What are the component motions of the rod?

2. Show three methods of reversal suitable to the plainer.

3. Show that the Peaucellier cell may be applied to obtain a straight line motion.

4. There is an epicyclic train in which the wheel A has 20 teeth; B, 30 teeth; and C, 40 teeth. In one second A revolves + 3 and the arm—2. Find the revolutions of B and C; and by considering the several simple motions show that your result for C is true.

5. Show that in the Oldham coupling the velocity ratio is constant, and discuss the character of the motion of the cross.

6. The major axis of an ellipse is 4 in., and the minor axis 2 in. Find the axis and an arc of 60° of another non-circular wheel which shall turn in rolling contact with a quadrant of the ellipse, having its centre as axis.

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7. The common perpendicular to two lines of shafting is 12 in., and when projected on a plane parallel to both they make an angle of 45°. Find the pitch surfaces of a pair of skew bevil wheels by which the axes may be connected in the velocity ratio of 2 : 3. (*a*) Find also the amount of sliding along the line of contact.

8. Find an approximate train, by Rankine's method, for $\frac{3}{2}\frac{5}{3}\frac{1}{3}$.

9. Design a Watt's parallel motion from the following data :—Distance between centres of radius rods 50 in., length of perpendicular to mean position of rods, 38 in., length of stroke 12 in., scale $\frac{1}{10}$.

MECHANISM.

FRIDAY, APRIL 1ST, 1887 :—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD, MA.E.

1. There is a crank two feet long, and its connecting rod six feet long. Find the position of the crank when the cross-head is at the middle of its stroke.

2. An involute toothed pinion drives a rack. Give two distinct forms of tooth which the rack may have, and state why these will work correctly.

3. Find the horse-power represented by the given indicator diagram. Use the planimeter. Steam scale, 50. Revolutions per minute 70. Area of piston 200 sq. in. Stroke 42 in.

4. Two cranks $A\,B$, $C\,D$ are united by a link $B\,C$. $A\,B = 4$, $B\,C = 8$, $C\,D = 3$. When the angle $A\,B\,C = 120°$, and $B\,C\,D = 60°$, and the centres are on opposite sides of the link, find the relative instantaneous angular velocities of $A\,B$, $B\,C$, $C\,D$.

5. Express, with the greatest possible exactness, the ratio between the angular velocities of two pulleys which are united by a strap.

6. Show by sketches three methods of reversal suitable to a plainer.

7. Show how Whitworth applied the crank and slotted lever to obtain a quick return in his shaping machine. (*a*) Obtain the velocity ratio for the crank and lever, and show how to represent this graphically.

8. Show that the Peancellier cell may be applied to obtain a straight line motion.

9. Sketch the form of ratchet usually employed in metal cutting machinery, and state the conditions necessary to its proper action.

10. Show how to apply the lazy tongs to the reduction of motion.

11. Show how to obtain the necessary feed motion to the cutter on a boring bar by means of an epicyclic train.

12. In a differential pulley block, what is the distance through which the weight is lifted in each revolution of the block?

FIRST YEAR.

CHEMISTRY.

MONDAY, APRIL 18TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. Distinguish between Alloys and Amalgams. What is generally true with regard to the melting point of an Alloy? Mention any Alloys which are very readily fusible, and give their constituents.

2. What volume of Carbon Dioxide will be produced by the combustion of 1 kilogramme of pure Carbon?

3. Give a concise sketch of the manufacture of Sulphuric Acid, illustrating the chemical changes by means of equations.

4. Write equations representing the changes that take place in each of the following cases:—(*a*) When a solution of Lead Acetate is added to one of Sodium Sulphate. (*b*) When a solution of Ammonium Carbonate is added to one of Calcium Nitrate. (*c*) When a solution of Silver Nitrate is added to one of Magnesium Chloride. (*d*) When Ammonium Sulphide is added to a solution of Ferric Chloride.

5. What is saponification? Give examples and equations.

6. Give the properties of Starch. How may Starch be converted into Sugar and the Sugar into Alcohol?

7. What are the principal by-products obtained in the manufacture of Beet-root Sugar?

8. How would you distinguish (*a*) a Nitrate from a Phosphate, (*b*) a salt of Antimony from one of Bismuth, (*c*) a salt of Iron from one of Nicke (*d*) a Stannous from a Stannic Salt?

9. Give the formulæ of the following substances:—Oxalic Acid, Cream of Tartar, Borax, Potassium Chloroplatinate, White Arsenic.

10. Distinguish carefully between the Allotropic forms of Phosphorus.

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THIRD YEAR (*Chemistry and Mining Courses*).

CHEMISTRY.

MONDAY, APRIL 18TH :—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D

1. Explain the importance of fractional distillation in the purification of many organic compounds.

2. How would you prepare Absolute Alcohol? How determine the quantity of Alcohol in a sample of Beer?

3. Give the properties of Brom-ethane, and describe its preparation. To what group of bodies does it belong?

4. How is the hardness of a water ascertained?

5. How is Fehling's Solution prepared? Explain its use in the estimation of Dextrose and Sucrose.

6. How would you determine the quantity of Sulphur in a sample of Coal?

7. A solution contains 7 grammes of Iron as Ferric Chloride. How much Sulphur is precipitated when Sulphuretted Hydrogen is passed into the solution in order to convert the Ferric into Ferrous Salt?

8. How much Sulphuric Acid must be added to a solution containing .85 gramme of Barium Nitrate in order to precipitate all the Barium?

9. How would you estimate the quantity of Carbonic Anhydride in a specimen of Limestone?

10. Describe the qualitative analysis of an alloy containing Copper, Zinc and Iron.

11. Find the percentage composition of Potassium Permanganate.

12. How much Sodium Phosphate must be used in precipitating (as Ammonium Magnesium Phosphate) the whole of the Magnesium from 100 c. c. of a ten per cent. solution of Magnesium Sulphate?

MINING COURSE, THIRD YEAR.

MINING.

SATURDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner, ... B. J. HARRINGTON, B.A., PH.D.

1. Distinguish (*a*) between dip and underlie, (*b*) between exploratory work and exploitation, (*c*) between drifts and crosscuts.

2. Compare the sinking of shafts and driving of galleries as regards cost. What are the ordinary dimensions of galleries in metal mines?

3. How would you sink a round shaft through surface deposits of sand or clay?

4. Give sketches and dimensions of skips and kibbles for raising ores, stating the circumstances under which they could be advantageously employed.

5. What are bords and pillars? Upon what do their dimensions depend? What are their dimensions in any of the Nova Scotia coal-mines?

6. What is long-wall work? Draw a plan illustrating the working of a coal-mine according to this system.

7. For the purposes of mining what is a thin coal-seam? What a thick one? What do you understand by working coal (*a*) on the ends, (*b*) on the face?

8. Describe (*a*) any form of safety-cage, and (*b*) any form of free-falling apparatus for use in boring.

9. How may broken bore-rods and retaining-tubes generally be extracted from bore-holes?

10. What are the different methods of stoping followed in the working of lodes? State the circumstances under which each method is applicable.

11. When lodes are too thick to be worked by ordinary methods of stoping what plan may be followed? Describe it.

12. If in driving due west on a vein a cross-course bearing north-east was met with, and the continuation of the vein was not found on driving straight through the cross course, would you be more likely to find the vein by driving to the right or to the left? Explain fully.

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B.A.Sc. EXAMINATIONS (*Mining Course, Ordinary and Advanced*).

(In ordinary Course select any seven of the questions.)

METALLURGY.

SATURDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. What is wrought Iron? Give its properties fully, and state how they are modified by the presence of impurities.

2. What are the differences in the properties of white and grey Pig Iron? What the causes inducing the production of one or other kind of Iron in the blast-furnace?

3. Describe some of the best appliances for the collection of waste-gases from blast-furnaces? Give sketches.

4. Describe Siemen's regenerative gas furnace. When used in the puddling process, what advantages and disadvantages does it possess as compared with the ordinary furnace?

5. What is Whitworth's process for the production of sound ingots of steel?

6. State what you know with regard to Russell's process for the lixiviation of Silver ores.

7. Describe the Washoe amalgamation process. In what circumstances is it applicable?

8. What is Plattner's process for the extraction of Gold? What ores are treated by it?

9. Explain the chemical changes supposed to take place (*a*) in the extraction of silver by barrel-amalgamation, and (*b*) in the extraction of Copper by the processes of Hunt and Douglas.

10. What are the physical properties of Tin? To what treatment are the Cornish ores generally subjected before reduction? How are the ores reduced

11. Lead is sometimes present in considerable quantity in Zinc, and unfits the latter for rolling. How may it be removed?

12. Compare the English and German methods of cupellation.

13. What are the best processes for desilverization of Lead? Describe one of them?

14. How are the following products obtained:—Pimple Metal, Roaster Slag, Rosette Copper, Blister Steel, Scouring Slag?

B.A. Sc. EXAMINATIONS (*Mining Course Advanced and Ordinary*).

Students in the Ordinary Course may select seven questions.

ASSAYING.

FRIDAY, APRIL 22ND :—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. How may the heating power of a fuel be approximately determined?
2. How would you determine the Iron (*a*) in a specimen of Bog Iron Ore (*b*) in a specimen of Titanic Iron Ore?
3. State what you know with regard to the assay for Gold and Silver when much Tellurium is present.
4. How would you ascertain the proportions of Gold and Silver in an alloy of these metals by a determination of the specific gravity?
5. How are cupels made? What are the essentials of a good cupel?
6. Give a concise description of the assay of Silver bullion.
7. Name the ores of Lead, and give the theoretical percentage of metal in each. Two grammes of Lead ore were assayed in the wet way and gave 0.5 grm. of Lead Sulphate. What percentage of Lead did the ore contain?
8. How would you determine the quantity of Nickel in an ore by electrolysis?
9. What are the best methods for the determination of Antimony by fire-assay? How would you estimate the quantity of Silver in a specimen of Stibnite containing a small proportion of that metal?
10. How would you determine the Copper in an ore consisting of a mixture of Copper Pyrites and Mispickel?
11. Name the ores of Manganese. How is their value determined?
12. How would you ascertain the value of each of the specimens exhibited?

B.A. Sc. (*Mining Course*).

ORE-DEPOSITS (PHILLIPS).

WEDNESDAY, APRIL 6TH :—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. What are the principal superficial deposits yielding minerals of economic value? Discuss their origin.
2. Illustrate by sketches some of the effects of faulting upon veins with different dips.
3. State what you know with regard to the distribution and association of Ores in Metalliferous veins.

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4. Explain briefly the nature of Stockworks, Fahlbands, and Pockets.

5. Describe the principal features of the gold-bearing veins of Nova Scotia.

6. What are the chief characteristics of the silver-bearing veins of Lake Superior?

7. Point out the more important characteristics of the ore-deposits of the Harz.

8. State what you know with regard to the metalliferous deposits of Cornwall.

9. What are the principal mineral products of Norway and Sweden?

10. What Ores are extensively mined in Spain? State briefly the more important facts with regard to their nature and mode of occurrence.

ENGLISH COMPOSITION.

SECOND AND THIRD YEARS.

THURSDAY, 7TH APRIL, 1887:—AFTERNOON, 2 TO 5.

Examiners,..... { CHAS. E. MOYSE, B.A. / PAUL T. LAFLEUR, B.A.

A. Make corrections wherever you think them necessary:—

(1) Some confine their attention to the most trifling trivialities. (2) From this has arisen boundless evils to the country. (3) Few, if any town or village has a name ending thus. (4) It was one of the falsest statements that ever was made. (5) These were the terms in which the sale of his property were stated. (6) No person can have lost their reputation in this affair. (7) This tract, with the adjoining island, were ceded to the enemy. (8) The king was an adept in the art, and a male and female devil were always in waiting. (9) I have now and then inserted in the text characters of books that I have not read on the faith of my guides. (10) He was a man who may claim a place in the temple of glory he has not filled. (11) The old instinct returned with double force than formerly. (12) Such are the difficulties with which it is involved. (13) He was quite willing to have run all risks. (14) This did not occur till the language had attained the ripeness of maturity. (15) The country was pervaded with men, who were not at all calculated to improve its condition. (16) One should not decide on so limited an acquaintance. (17) Being nearly killed, we sent out a party to search for his mangled body. (18) One cannot see the harmony between the whole composition. (19) There is little use and no pleasures to be gained by such pursuits. (20) The chain of artistic descent loses itself in the fountain-head of art.

B. Punctuate the following passage :—

Words are something but to be exposed to an endless battery of mere sounds to be long a dying to lie stretched upon a rack of roses to keep up languor by an unintermitted effort to pile honey upon sugar and sugar upon honey to an interminable tedious sweetness to fill up sound with feeling and strain ideas to keep pace with it to gaze on empty names and be forced to make the pictures for yourself to read a book all stops and be forced to supply the verbal matter to invent extempore tragedies to answer to the vague gestures of an imperceptible mime these are faint shadows of what I have undergone from a series of the ablest executed pieces of this empty instrumental music.

C. Write an essay of not less than two pages in length upon any one of the following subjects :—

The winter of 1886-7 in Montreal.
Imperial Federation.
The Most Useful Profession.
The World in 1987.

BURLAND PRIZE IN CHEMISTRY.

FRIDAY, SEPTEMBER 24TH ;—AFTERNOON, 2 TO 5.

Examiners, ... { G. P. GIRDWOOD, M.D.
B. J. HARRINGTON, B.A., PH.D.

1. 5 grammes of Lead Nitrate are dissolved in Water and Hydric Sulphide passed into the Solution. How much Lead Sulphide will be produced and how much Nitric Acid set free ?

2. Calculate the percentage composition of Ammonium Chloride and of Nitro-benzol.

3. Write equations illustrating the changes which take place (*a*) when ammonia-water is added to a solution of Aluminium Sulphate, (*b*) when Chlorine gas is passed through a solution of Potassium Ferrocyanide.

4. How many litres of Hydrochloric Acid gas can be made by decomposing 10 Kilogrammes of Sodium Chloride with Sulphuric Acid ?

5. What ground is there for the statement that the molecules of Arsenic and Phosphorus each contain four atoms ?

6. State briefly how you would prepare each of the following compounds :—Carbonic Oxide, Ethylene, Dextrin, Nitro.glycerin, Potassium Ferrocyanide.

7. Moist Caustic Potash is exposed to Carbonic Oxide at a temperature of 100°. What takes place ? Give the equation.

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8. State what you know with regard to the properties of the metals Magnesium and Aluminium.

9. By what tests would you distinguish (*a*) Mercurous from Mercuric Salts, (*b*) Stannous from Stannic Salts, (*c*) Ferrous from Ferric Salts ?

10. What are substitution compounds ? Give several examples.

NOTE.—Papers common to the Faculty of Arts and Applied Science will be found under Faculty of Arts, ante.

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INTERNATIONAL LAW AND SALES.

MONTREAL, 28TH MARCH, 1887.

Examiner,..... .....PROFESSOR N. H. KERR, Q.C., D.C.L.

A sold to B a lot of goods, to be delivered within ten days of the day of sale. A only offered to deliver on the twelfth day after the sale, B refused to accept, the goods having fallen in price, A sued B for damages. Can A recover, if yea, what are his damages? Give your reasons.

A, a broker, sold to B for C 100 tons of iron, sent to B a bought note and to C a sold note of the bargain, the price in the sold note was expressed to be for cash, whilst to the bought note it was expressed as payable by note at three months. B refused to accept the iron, and C sued him for the price after tender.

Can C recover? Give your reasons.

A sold B verbally 100 tons of iron, at a certain price per ton, payable by note at three months, deliverable in ten days. A memorandum in writing was drawn up embodying all the terms of the agreement, save that the payment was to be by note at three months. A tendered the iron and B refused to accept. Iron having fallen in price A sued B to recover the difference between the contract and market price on the day on which it was stipulated it should be delivered.

Is A entitled to judgment? Give your reasons.

A sold to B on credit a quantity of wheat stored in A's name in a warehouse at Montreal, and gave B a delivery order on the warehouseman. B showed the delivery order to the warehouseman, who said it was all right, but made no entry in his books, the wheat standing in A's name; B became insolvent ere his term of credit had expired, and A served a notice upon the warehouseman not to deliver to B or his representative.

The curator to B's estate on the refusal of the warehouseman to deliver took out a *saisie-revendication*; in this suit A intervened, claiming to hold the wheat until he should be paid.

Is A entitled to succeed on his intervention? Give your reasons.

During the last war between Germany and France a British subject, domiciled at Hamburg in Germany, loaded one of his vessels with German manufactured goods and dispatched her to New York. On the voyage he was captured by a French man-of-war, taken into Bordeaux and condemned as good prize.

Was the condemnation according to the principles of International Law? Give your reasons.

A, a merchant in London, dispatched goods in accordance with orders to B, a merchant in Montreal by steamer, sending to B the bill of lading,

therefor, endorsed to the latter's order. B on arrival of the steamer presented his bill of lading, received the goods, and placed them in a Customs bonded warehouse ; ten days after such receipt he became insolvent. A's agent at Montreal caused to be issued a *saisie revendication* and seized the goods.

Is A entitled to recover back the goods, and is the sale dissolved? Give your reasons.

During the war between the United and Confederate States a British vessel, loaded with supplies of all kinds, ran the blockade of Charleston in South Carolina, discharged her cargo, and started light on her return to Liverpool. After touching at Nassau, she was captured by a United States frigate and taken into New York, where she was libelled for condemnation.

Was the capture legal? Give your reasons.

A, a Frenchman domiciled in the Province of Quebec, married at Montreal, without any contract, B, a French Canadian woman, born and domiciled in that Province, who possessed at her marriage real and personal property therein. A returned with his wife to France, and there remained until he died, leaving four children, issue of his marriage. By his will made in Quebec, in holograph form, he bequeathed the usufruct of his property real and personal, all situated in France, to his wife, with the provision therein that after her death it was to revert to his children.

What law should the French Courts be guided by in pronouncing upon the validity of the bequest and of the will? Give your reasons.

A, a merchant in Montreal, bought from B, a merchant in Liverpool, 100 barrels of oil at a certain price per gallon, to be delivered at Montreal. B shipped the oil by steamer to Montreal, taking the bill of lading to his own order. He then drew a bill of exchange for the price, attached to it the bill of lading, and despatched both by mail to his agent in Montreal, with instructions not to deliver the bill of lading without acceptance of the bill of exchange. On the bill of exchange being presented to A he accepted it, and the bill of lading was duly handed to him properly endorsed. The vessel on which the oil was shipped foundered at sea, and the oil was totally lost. B when the bill of exchange became due sued A for the amount.

Has A any defence? Give your reasons.

N.B. The first six questions for ordinary students. The whole paper for medal and Professor's prize.

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FIRST YEAR.

CRIMINAL LAW.

FRIDAY, DEC. 17TH, 1886.

Examiner,.....PROF. ARCHIBALD.

1. A delivered a parcel to a carrier to be given to B. C pretending to be B obtained the parcel from the carrier's servant, of what offence was C guilty and give reasons? (1 Leach C. C. 520.)

2. Give the rules by which the common and statute law harmonize with each other.

3. Define conspiracy, libel, larceny, embezzlement, murder, riot and obtaining by false pretences.

4. A kills B, acting under an *irresistible* influence, is he guilty of manslaughter? What is the criterion of responsibility in such cases? (1 F. & F. 666.)

5. Under what circumstances is a medical practitioner responsible for manslaughter when a patient dies under his treatment? (3 C. & P. 629.)

6. Two private watchmen, seeing the prisoner and another person with two carts laden with apples which they had jointly stolen, went up to them intending as soon as they could get assistance to secure them; one of the watchmen walked beside the prisoner, and the other watchman beside the other person, at some distance from the prisoner. The other person wounded the watchman who was near him.

Should the prisoner be convicted of the wounding? If not, give reasons and state any additional circumstances which would render the prisoner guilty. (4 C & P. 565.)

SECOND AND THIRD YEARS.

CRIMINAL PROCEDURE.

THURSDAY, 24TH MARCH, 1887.

Examiner,..... PROFESSOR ARCHIBALD.

1. In what cases may an arrest be made in a district other than that in which the warrant issued?

2. What is the general rule as to the place where an offence should be tried? State exceptions to the rule.

3. Distinguish between the qualifications of a Grand and Petit juryman.

4. What persons are exempt from serving as jurors? What persons are disqualified from serving as jurors.

5. What is the meaning of "*Venue*" in relation to an indictment? Is it necessary to state the venue in the body of the indictment? Give exceptions.

6. What is an indictment? What are its constituent parts?

7. "*A*" in an affidavit for capias, in a suit of *A* vs. *B*, made the following statement:

"The Defendant is personally indebted to me in the sum of $45.00 for goods; the Defendant is now immediately about to abscond from the Province of Canada with intent to defraud; without the benefit of a writ of capias to arrest the Defendant, the Plaintiff will lose his recourse," all of which was false. Draft an indictment for perjury on above facts.

8. Give a short resumé of the law in relation to proof of admissions made by an accused person in criminal matters.

9. In what cases may a deposition of a witness given upon a preliminary examination before a magistrate be read in evidence at the trial?

N.B.—The first six questions are for the pass examinations; the whole paper for the medal.

PREMIÈRE ANNÉE.

HISTOIRE DU DROIT CANADIEN.

Examinateur,.....PROF. LAREAU.

1. Le Conseil Supérieur de Québec. Ses droits et attributions. Sa composition.

The Supreme Council of Quebec. Its rights and attributions. The composition of its members.

2. Quelles sont les principales clauses de l'Acte Constitutionnel de 1791?

What are the principal dispositions of the Constitutional Act of 1791?

3. Quels sont les principaux changements introduits par les codificateurs au titre de la vente?

What are the principal modifications brought by the codifiers in the title of sale?

4. Enumérez les principales dispositions législatives qui furent adoptées de 1840 à 1867?

Give the principal subjects debated before the House from 1840 to 1867.

5. Quels sont les pouvoirs des législatures locales et du Parlement Fédéral d'après l'Acte de la Confédération?

What are the powers of the Provincial Legislatures and of the Federal Government by the Confederation Act?

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6. Comment se règle la représentation dans la Chambre des Communes d'après le même acte ?

How is the mode of representation in the House of Commons regulated by the same act ?

DEUXIÈME ET TROISIÈME ANNÉES.

Examinateur,..... PROF. LAREAU.

1. Qu'est.ce qu'un privilège ? Qu'est-ce qu'une hypothèque ? Quelle différence y a-t-il entre les deux ?

What is a privilege ? What is a hypothec ? What is the difference between the two ?

2. Quels sont les droits privilégiés que possède le vendeur non payé sur la chose vendue ?

What are the privileged rights of the unpaid vendor of a thing ?

3. Quelles sont les différentes espèces d'hypothèques légales ? Définissez ?

What are the different kinds of legal hypothec ? Define ?

4. Quelles sont les exceptions que le tiers-détenteur peut opposer à l'action hypothécaire ? Définissez les cas ?

What are the exceptions the holder may set up against the hypothecary action ? Define the different cases ?

5. Qu'est-ce que l'intervertion de titre ? Dans quel cas a-t-elle lieu ?

What is meant by intervertion of title ? In what cases does it take place ?

6. Qu'est-ce que la possession ?

What is possession ?

7. Quelles choses sont imprescriptibles ; et qu'entendez-vous par prescriptions privilégiées ?

What things are imprescriptible, and what is previleged prescriptions ?

8. Quelles sont les causes qui interrompent la prescription ?

By what causes is the prescription interrupted ?

9. Comment s'éteignent les privilèges et les hypothèques ?

How privileges and hypothecs become extinct ?

[Les élèves qui concourent pour la médaille répondront à toutes les questions ; ceux qui ne concourent pas répondront aux six premières questions seulement.

The first six questions for ordinary. The whole nine for candidates for the medal]

FIRST YEAR.

EXAMINATION IN CIVIL LAW.

WEDNESDAY, DECEMBER 22ND, 1886.

Examiner,.....PROFESSOR ROBIDOUX.

1. Who has the status of a British Subject ?

2. What is understood by civil death? How is it incurred? What are its effects ?

3. What are the effects of absence with regard to marriage?

4. For what causes can marriage be annulled? By whom and when can the grounds of nullity be invoked?

5. What are the grounds of separation from bed and board? What are the formalities of the demand? What are the effects of separation from bed and board?

6. What are the obligations of the tutor during the administration, and what are his powers?

SECOND AND THIRD YEARS.

22ND DECEMBER, 1886.

Examiner,.....PROFESSOR ROBIDOUX.

1. What is required to enable one to inherit? Who is unworthy to inherit?

2. What is representation? When does it take place?

3. What is understood by *retour legal* and by *retour conventionel?* What is the difference between their respective effects?

4. What are the formalities of acceptance under benefit of inventory? and what are the obligations of the beneficiary heir?

5. What is an action of partition, and who can take it?

6. What is understood by return, and what are the different ways to effect the same?

7. What is a donation *inter vivos?* What is a donation *à cause de mort?* What is understood by *institution d'héritier?*

8. What is the effect of want of registration of donations, and by whom can it be invoked?

9. When may donations be revoked? What are the grounds of revocation?

N.B.—Students of the third year who do not concur for honors must not answer the three last questions. Students of the second year will only answer the first six questions.

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FIRST YEAR.

COMMERCIAL LAW.

AGENCY AND PARTNERSHIP.

WEDNESDAY, 30TH MARCH.

Examiner,.....PROFESSOR L. H. DAVIDSON, M.A., D.C.L.

1. Give definition of the contract of "Agency," and state what are the essentials in its formation. Name the principal classes of commercial agents, and distinguish between each.

2. Explain the difference between a general and a special agent. Explain the maxium *vicarius non habet vicarium*. What is meant by a *del credere* commission, and how does it arise and when is it payable?

3. What are the chief obligations of the principal towards his agent and of the agent towards his principal? What is the "lien" of the agent and when and to what does it attach?

4. Define "Partnership," and state the rules for determining whether such a relationship exists or not relatively to third parties in the absence of definite agreement evidencing it.

5. Name the different kinds of commercial partnerships, and give the distinguishing characteristics of each and the formalities, if any, necessary to be observed in their formation.

6. In what ways may partnerships be dissolved? What is the effect of dissolution (*a*) as to third parties (*b*) as to the partners themselves? and what are the rights of the latter in regard to the partnership property?

SECOND AND THIRD YEARS.

COMMERCIAL LAW.

JOINT STOCK COMPANIES AND CORPORATIONS.

WEDNESDAY, 30TH MARCH.

Examiner,.....PROFESSOR L. H. DAVIDSON, M.A., D.C.L.

1. How may a Joint Stock Company be formed under the Laws of Canada? State the steps necessary to be taken; explain fully.

2. In what respects does a Joint Stock Company differ from a Corporation *proper*, and from an ordinary partnership? Explain fully. How are the affairs of the Company directed and managed, and what are the chief powers of those entrusted with such management?

3. What is meant by the *capital* stock of the Company? How is it determined? How is it made available? Can it be increased or decreased, and

if so how? What is meant by "Preference" or "Preferential" Stock, and what privileges attach to it?

4. How is the liability of a shareholder in a Joint Stock Company determined? How does it cease?

5. What is meant by the term "dividends," and from what are they derived? How are they determined? When has the shareholder right thereto? What sett-off may there be against them.

6. How is the will of the shareholders in any Company ascertained? Explain fully.

7. What is the position of Directors of a Joint Stock Company, relatively to it and to the public? How do they act in the conduct of the affairs of the Company, and what is necessary to ensure valid action on their *part?* Explain fully.

8. What is meant by *Discretionary*, *Directory* and *Imperative* formalities, as applied to the action of Directors of a Company, and what is the effect of the omission of such formalities? Explain fully.

9. What is necessary in order to a valid transfer of Stock by a shareholder? What responsibilities have directors in regard to transfer of stock?

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UNIVERSITY SHOOL EXAMINATIONS.

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UNIVERSITY SCHOOL EXAMINATIONS.

PRELIMINARY SUBJECTS.

ENGLISH GRAMMAR.

Examiners,..... ..... { CHAS. E. MOYSE, B.A. / REV. PROF. SCARTH, M.A. / REV. PROF. READ, M.A. / PAUL T. LAFLEUR, M.A.

WEDNESDAY, JUNE 1ST :—AFTERNOON, 3.30 TO 5.

(You are requested to answer any two (but not more than two) questions in *each* of the Divisions I., II. and III.)

I.

1. Define (*a*) adverbial sentence (*b*) extension, (*c*) complex sentence. Give an example of each.

2. Give plain rules for the formation of (*a*) the plural of substantives; (*b*) the comparison of adjectives and adverbs. Give instances and exceptions.

3. Write out the chief parts of the verbs aid, tell, sweep, beseech, spring, dive, give. To what class does each of these verbs belong?

II.

1. Analyse carefully :—

> Yet live there still who can remember well,
> How when a mountain chief his bugle blew,
> Both field and forest, dingle, cliff and dell,
> And solitary heath, the signal knew.

2. Parse carefully the first two lines quoted in the last question.

3. Rewrite in prose, and analyse :—

> "This it is:
>
> 'Tis better that the enemy seek us:
> So shall he waste his means, weary his soldiers,
> Doing himself offence; while we, lying still,
> Are full of rest, defence, and nimbleness."

III.

1. Name the various kinds of verbs, and conjugate the verb strike throughout.

2. Define with examples, a root-word, a primary derivative, and a compound word. How did Latin words find their way into the English Language?

3. What is inflection? Name all the parts of speech inflected, and show by examples these inflections as they are used in English.

ARITHMETIC.

WEDNESDAY, JUNE 1ST:—AFTERNOON, 2 TO 3.30.

Examiners..... { G. H. CHANDLER, M.A.
REV. G. THORNELOE, M.A.

Only two questions from each Division to be answered.

Division I.

1. Give the table of Avoirdupois weight. How many grains are there in a pound Avoirdupois?

2. Reduce .347038 to a vulgar fraction, and reduce the fraction to its lowest terms.

3. Reduce $\frac{11\frac{5}{7} - 7\frac{5}{11}}{3\frac{1}{2} + 5\frac{5}{22}}$ inches to the decimal of a rod.

Division II.

4. Divide $161.40 among three persons so that their shares may be to one another as the numbers 3, 4, 5.

5. Find the square root of 375.641 and of .001, carrying the work out to 4 decimal places in each case.

6. How much must be paid for insuring a house for $4,250. the premium of insurance being at the rate of $\frac{3}{8}$ of one per cent.?

Division III.

7. Find the simple interest on $245.63 at 6 per cent. for the remainder of this year.

8. The difference of two numbers is 26, and $3\frac{1}{2}$ times the greater $= 6\frac{3}{4}$ times the less; what are the numbers?

9. How many pounds of tea at 33 cents per pound must be mixed with 70 pounds at 45 cents per pound, that the mixture may be sold at 40 cents per pound?

GEOGRAPHY.

Examiners,..... { CHAS. E. MOYSE, B.A.
REV. PROF. SCARTH, M.A.
REV. PROF. READ, M.A.
PAUL T. LAFLEUR, M.A.

WEDNESDAY, JUNE 1ST:—MORNING, 9 TO 10.

(You are requested to answer any two (but not more than two) questions in *each* of the Divisions I. and II. and one question of Division III.)

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I.

1. Explain the following terms: vernal equinox, plateau, confluence, water-shed, meridian, great circle, antipodes.

2. To what lines is the position of any place on the earth's surface referred? When it is noon at Candia, it is twenty minutes past ten in the morning of the same day at Greenwich; give the longitude of Candia.

4. What phenomena are caused by the revolution of the Earth on her own axis, and by her revolution round the Sun? State what you know about the cause of the Tides.

II.

1. State, without any detail, in what *countries* the following ranges of mountains are situated: Grampian, Western Ghauts, Laurentian, Alleghany, Blue, Valdai, Pindus, Cumbrain.

2. State the position of the Odessa, Madras, Sarnia, Melbourne, Chicago, Lyons, Toronto, Bristol. Monte Video, Baltimore.

4. Trace the courses of the Nile and Rhine, and name important places on each.

III.

1. Give a brief account of the rivers and exports on the Dominion of Canada.

2. Name the British possessions in Europe and in Asia, and state accurately where each is situated.

BRITISH AND CANADIAN HISTORY.

Examiners, ... { CHAS. E. MOYSE, B.A.
REV. PROF. SCARTH, M.A.
REV. PROF. READ, M.A.
PAUL T. LAFLEUR, M.A.

TUESDAY, JUNE 2ND :—MORNING, 9 TO 10.30.

(You are requested to answer any two (but not more than two) question in *each* of the Divisions I., II. and III.)

I.

1. Explain the following: One Hundred Associates, Quebec Act, Right of Search, Clergy Reserves, U. E. Loyalists.

2. What events are connected with the dates 1603, 1672, 1713, 1758, 1812, 1831, 1837, 1867?

3. Give a brief account of each one of the following, and state clearly his importance in relation to the history of Canada :—Laval, Bigot, Lord Dorchester, McGee, Maisonneuve, Montgomery, Brock, Tecumseh.

II.

1. State the causes of the Canadian Rebellion of 1837 in both provinces, and general results, and the leaders who took part in it.

2. State the main points in regard to the following, and assign dates : —Poynings' Act, Bill of Right, Petition of Right, Treaty of Utrecht, Reform Bill.

3. Give some account of domestic and social life in Stuart England.

III.

1. Explain briefly, with dates :—Benevolence, "Thorough," Popish Plot, South Sea Scheme, National Debt, Forest Laws.

2. What part was played in political history by each of the following —Peel, Monk, Burleigh, Milton, Clarendon ?

3. State what Parliaments in the course of English history have received nicknames, and why. Give dates when you can.

GOSPELS.

Examiner,..... Rev. Prof. Scarth, M.A.

Wednesday, June 1st :—Morning, 11 to 12.

1. State what is recorded in the Gospels of the boyhood of our Lord.

2. Write out the account of the Temptation in the Wilderness.

3. Give an account of the three raisings from the dead by our Lord.

4. Give an account of the Transfiguration.

5. Write out the "seven words" from the Cross *or* seven of the Beatitudes.

EXTRACT FOR READING.

Such a sight had never been seen in Devonshire. Many of the citizens went forth half a day's journey to meet the champion of their religion. All the neighboring villages poured forth their inhabitants. A great crowd, consisting chiefly of young peasants, brandishing their cudgels, had ascended on the top of Haldon Hill, whence the army, marching from Chudleigh, first descried the rich valley of the Exe, and the two massive towers rising from the cloud of smoke which overhung the capital of the West. The road, all down the long descent, and through the plain to the banks of the river, was lined, mile after mile, with spectators. From the West Gate to the Cathedral Close, the pressing and shouting on each side was such as reminded Londoners of the crowds on the Lord Mayor's day. The houses were gaily decorated. Doors, windows, balconies, and roofs were thronged with gazers. An eye accustomed to the pomp of war

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would have found much to criticize in the spectacle. For several toilsome marches in the rain, through roads where one who travelled on foot sank at every step up to the ankles in clay, had not improved the appearance either of the men or of their accoutrements; but the people of Devonshire, altogether unused to the splendour of well ordered camps, were overwhelmed with delight and awe. Descriptions of the martial pageant were circulated all over the kingdom. They contained much that was well fitted to gratify the vulgar appetite for the marvellous. For the Dutch army, composed of men who had been born in various climates, and had served under various standards, presented an aspect at once grotesque, gorgeous, and terrible to islanders who had, in general, a very indistinct notion of foreign countries. First rode Macclesfield at the head of two hundred gentlemen, mostly of English blood, glittering in helmets and cuirasses, and mounted on Flemish war horses. Each was attended by a negro, brought from the sugar plantations on the coast of Guiana. The citizens of Exeter, who had never seen so many specimens of the African race, gazed with wonder on those black faces, set off by embroidered turbans and white feathers. Then, with drawn broadswords, came a squadron of Swedish horsemen in black armour and fur cloaks. They were regarded with a strange interest; for it was rumoured that they were natives of a land where the ocean was frozen, and where the night lasted through half the year, and that they had themselves slain the huge bears whose skin they wore. Next, surrounded by a goodly company of gentlemen and pages, was borne aloft the Prince's banner. On its broad folds the crowd which covered the roofs and filled the windows read with delight that memorable inscription, "The Protestant religion and the liberties of England." But the acclamations redoubled when attended by forty running footmen, the Prince himself appeared, armed on back and breast, wearing a white plume, and mounted on a white charger. With how martial an air he curbed his horses, how thoughtful and commanding was the expression of his ample forehead and falcon eye, may still be seen on the canvass of Kneller.

DICTATION.

WEDNESDAY, JUNE 1ST:—MORNING, 10 TO 11.

(This extract is to be read *three* times. The writing will take place on the second reading. The first and third readings are respectively designed to give the candidates an idea of the character of the extract and to punctuate. The reader may mention the full-stops, and may, if he thinks it *necessary*, repeat a word or clause at the request of a candidate.)

But now all is to be changed. All the pleasing illusions, which made power gentle, and obedience liberal, which harmonized the different shades

of life, and which, by a bland assimilation, incorporated into politics the sentiments which beautify and soften private society, are to be dissolved by this new conquering empire of light and reason. All the decent drapery of life is to be rudely torn off. All the superadded ideas, furnished from the wardrobe of a moral imagination, which the heart owns, and the understanding ratifies, as necessary to recover the defects of our naked shivering nature, and to raise it to dignity in our own estimation, are to be exploded as a ridiculous, absurd and antiquated fashion. On this scheme of things, a king is but a man; a queen is but a woman; a woman is but an animal, and an animal not of the highest order. All homage paid to the sex in general as such, and without distinct views, is to be regarded as romance and folly. Regicide, and parricide, and sacrilege, are but fictions of superstition, corrupting jurisprudence by destroying its simplicity. The murder of a king, or a queen, or a bishop, or a father, are only common, homicide; and if the people are by any chance, or in any way, gainers by it a sort of homicide much the most pardonable, and into which we ought not to make too severe a security. On the scheme of this barbarous philosophy, which is the offspring of cold hearts and muddy understandings, and which is as void of solid wisdom as it is destitute of all taste and elegance, laws are to be supported only by their own terrors, and by the concern which each individual may find in them from his own private speculations, or can spare to them from his own private interests. Nothing is left which engages the affections on the part of the common-wealth. On the principles of this mechanic philosophy, our institutions can never be embodied, if I may use the expression, in persons; so as to create in us love, veneration, admiration, or attachment.

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OPTIONAL SUBJECTS.

GREEK.

MONDAY, JUNE 6TH—MORNING, 9 TO 12.

Examiners, { REV. GEORGE CORNISH, LL.D.
REV. CANON NORMAN, D.C.L.

(A)

1. Translate, Homer, Iliad Bk. VI.—

Τὴν δ' αὖτε προσέειπε μέγας κορυθαίολος Ἕκτωρ
„ἦ καὶ ἐμοὶ τάδε πάντα μέλει, γύναι· ἀλλὰ μάλ' αἰνῶς
αἰδέομαι Τρῶας καὶ Τρῳάδας ἑλκεσιπέπλους,
αἴ κε κακὸς ὣς νόσφιν ἀλυσκάζω πολέμοιο·
οὐδέ με θυμὸς ἀνωγεν, ἐπεὶ μάθον ἔμμεναι ἐσθλὸς
αἰεὶ καὶ πρώτοισι μετὰ Τρώεσσι μάχεσθαι,
ἀρνύμενος πατρός τε μέγα κλέος ἠδ' ἐμὸν αὐτοῦ.
εὖ γὰρ ἐγὼ τόδε οἶδα κατὰ φρένα καὶ κατὰ θυμόν.
ἔσσεται ἦμαρ ὅτ' ἂν ποτ' ὀλώλῃ Ἴλιος ἱρὴ
καὶ Πρίαμος καὶ λαὸς ἐϋμμελίω Πριάμοιο.
ἀλλ' οὔ μοι Τρώων τόσσον μέλει ἀλγος ὀπίσσω,
οὔτ' αὐτῆς Ἑκάβης οὐδὲ Πριάμοιο ἄνακτος
οὔτε κασιγνήτων, οἵ κεν πολέες τε καὶ ἐσθλοὶ
ἐν κονίῃσι πέσοιεν ὑπ' ἀνδράσι δυσμενέεσσιν,
ὅσσον σεῦ, ὅτε κέν τις Ἀχαιῶν χαλκοχιτώνων
δακρυόεσσαν ἀγηται, ἐλεύθερον ἦμαρ ἀπούρας.

2. (*a*) Write down the name and scheme of the metre of the above extract, and scan the first three verses, noting any metrical peculiarities. (*b*) Note any peculiarities of the Homeric dialect.

3. Translate and explain the following, giving in each case the Attic form :—

τέτμεν, ἔπεφνε, φιλέεσκε, ἔσκε, ὄεσσι, πεπύθοιτο, ὔμμι, πόλινδε, ἄλτο, ἔσταν, ὄττι, προτί, κάλλιφ', ἴομεν, εἴπῃσι, Λυκίηνδε.

4. Translate :—(1) Βῆ δ' ἰέναι. (2) αἰὲν ἀριστεύειν καὶ ὑπείροχον ἔμμεναι ἄλλων. (3) ὡς κέ οἱ αὐτῷ γαῖα χάνοι. (Explain this use of the Optative Mood.)

(B)

5. Translate, Xenophon, Anabasis, Book I., and give as accurately as you can the import of the Tenses in ext. (*b*) :—

(*a*) Ἐνταῦθα Ξέρξης, ὅτε ἐκ τῆς Ἑλλάδος ἡττηθεὶς τῇ μάχῃ ἀπεχώρει, λέγεται οἰκοδομῆσαι ταῦτά τε τὰ βασίλεια, καὶ τὴν Κελαιν ἀκρόπολιν. Ἐνταῦθα ἔμεινε Κῦρος ἡμέρας τριάκοντα· καὶ ἦκε Κλέαρχος ὁ Λακεδαιμόνιος φυλὰς, ἔχων ὁπλίτας χιλίαης, καὶ πεπλαστὰς Θρᾳκας ὀκτοκοσίους καὶ τοξότας Κρῆτας διακοσίους. Ἅμα δὲ καὶ Σωσίας παρῆν ὁ Συρακόσιος, ἔχων ὁπλίτας χιλίους, καὶ Σοφαίνετος ὁ Ἀρκὰς, ἔχων ὁπλίτας χιγίους. Ἐυταῦθα Κῦρος ἐξέτασιν καὶ ἀριθμὸν τῶν Ἑλλήνων ἐποίησεν ἐν τῷ παραδείσῳ, καὶ ἐγένοντο

οἱ σύμπαντες, ὁπλῖται μὲν μύριοι καὶ χίλιοι, πελτασταὶ δὲ ἀμφὶ τοὺς δισχιλίους.

Ἐντεῦθεν ἐξελαύνει σταθμοὺς δύο, παρασάγγας δέκα, εἰς Πέλτας, πόλιν οἰκουμένην. Ἐνταῦθα ἔμεινεν ἡμέρας τρεῖς· ἐν αἷς Ξενίας ὁ Ἀκρὰς τὰ Λύκαια ἔθυσε, καὶ ἀγῶνα ἔθηκε· τὰ δὲ ἆθλα ἦσαν στλεγγίδες χρυσαῖ. ἐθεώρει δὲ τὸν ἀγῶνα καὶ Κῦρος. Ἐντεῦθεν ἐξελαύνει σταθμοὺς δύο, παρασάγγας δώδεκα, εἰς Κεραμῶν ἀγοράν, πόλιν, οἰκουμένην, ἐσχάτην πρὸς τῇ Μυσίᾳ χώρᾳ.

(*b*) Ἐνταῦθ ἔμεινε Κῦρος καὶ ἡ στρατιὰ ἡμέρας εἴκοσιν· οἱ γὰρ στρατιῶται οὐκ ἔφασαν ἰέναι τοῦ πρόσω. ὑπώρτευον γὰρ ἤδη ἐπὶ βασιλέα ἰέναι. μισθωθῆναι δὲ οὐκ ἐπὶ τούτῳ ἔφασαν. Πρῶτος δὲ Κλέαρχος τοὺς αὐτοῦ στρατιώτας ἀβιάζετο ἰέναι· οἱ δὲ αὐτόν τε ἐβαλλον, καὶ τὰ ὑποζύγια τὰ ἐκείνου, ἐπεὶ ἤρξατο προϊέναι. Κλέαρχος δὲ τότε μὲν μικρὸν ἐξέφυγε τὸ μὴ καταπετρωθῆναι· ὕστερον δὲ, ἐπεὶ ἔγνω ὅτι οὐ δυνήσεται βιάσασθαι, συνήγαγεν ἐκκλησίαν τῶν αὐτοῦ στρατιωτῶν· καὶ πρῶτον μὲν ἐδάκρυε πολὺν χρόνον ἑστώς· οἱ δὲ ὁρῶντες ἐθαύμαζον καὶ ἰσιώπων· εἶτα ἔλεξε τοιάδε.

6. (*a*). (1) βασίλεια, Λύκαια:—What part of speech, and what words are here omitted? (2) τὸ μὴ καταπετρωθῆναι:—Explain this use of the negative particle. (*b*) Distinguish between the meaning of ψιλὴν ἔχων τὴν κεφαλήν and ἔχων τὴν ψιλὴν κεφαλήν. (*c*) Explain the forms πγείους, μείζους. (*d*) περὶ μέσας νύκτας:—Why is the plural here used? (*e*) When may a neuter Plural be construed with the verb in the plural?

7. Write down the 1*st. Sing. Pres. Ind.* of the following Participles:—παριών, κερόσας, λελοιπώς, αἴρουσα, ἀναγνούς, παροῦσιν. (*b*) Parse the following verbs, and give the *Pres. Inf.* of each.:—ἐλῶντα, εἰσῆεσαν, παρήνει, προσεκύνησαν, κατακεκώψεσθαι, ἵεντο, ἦγον, ἐπιστάσωσαν, πείσομαι ἐτετίμητο, ὕπισχνῆ, ἐξήχθη, ἀπεδείχθη.

8. State as accurately as you can the force of the prepositions in the following expression:—(*a*) ἀπὸ τούτων τῶν χρημάτων. (*b*) ἀποπέμπει ἐπὶ τὴν ἀρχήν. (*c*) ἐσται ἐπὶ τῷ ἀδελφῷ. (*d*) ἀφικνεῖτο παρὰ βασιλέως πρὸς αὐτόν. (*e*) ἐκ βασιλέως δεδομέναι.

9. (*a*) Decline the following words:—ἀνήρ, ῥήτωρ, λαγώς, χώρα, δῆμος, υἱός, στράτευμα, ὅστις. (*b*) Write down the *Nom. Sing.* and *Dat. Plu.* of γυναῖκα, κέρατα, χειμῶνος, ὄρνιν, μηνός, τείχη.

10. Give the Comparative and Superlative of:—πολύς, ταχύς, πιστός, σοφός, ἄνω, μάλα. (*b*) Write down the *Aorist* and *Future* (1st Sing.) of:—τέμνω, ἀγγέλω, γίλνομαι, πάσχω, πέμπω, πίπτω.

11. Put into Greek:—(1) Every city. (2) The whole city. (3) Cyrus came with two others. (4) The greater bart of the country. (5) Some said this, others that.

LATIN.

THURSDAY, JUNE 2ND :—AFTERNOON, 2 TO 5.

Examiners,..... | REV. GEORGE CORNISH, LL.D.
REV. CANON NORMAN, D.C.L.

Candidates from Academies under the control of the Protestant Committee are required to answer the following questions only, viz. :—1 *to* 7 *inclusive; and* 1 *to* 12 *inclusive.*

(A)

1. Translate, Virgil, Æn., Bk. II. :—

(*a*) Primus ibi ante omnes, magno comitante caterva,
Laocoon ardens summa decurrit ab arce,
Et procul: O miseri, quæ tanta insania, cives?
Creditis avectos hostes? *aut ulla putatis*
Dona carere dolis Danaum? Sic notus Ulixes?
Aut hoc inclusi ligno occultantur Achivi,
Aut hæc in nostros fabricata est machina muros,
Inspectura domos venturaque desuper urbi,
Aut aliquis latet error; equo ne credite, Teucri
Quidquid id est, timeo Danaos et dona ferentes.

(*b*) O lux Dardaniæ, spes o fidissima Teucrûm,
quae tantae tenuere morae? Quibus Hector ab oris
exspectate venis? Ut te post multa tuorum
funera, post varios hominumque urbisque labores
defessi adspicimus? quæ caussa indigna serenos
foedavit vultus? aut cur haec vulnera cerno?
Ille nihil; nec me quaerentem vana moratur;
sed graviter gemitus imo de pectore ducens;
Heu fuge, nate dea, teque his, ait, eripe flammis.

2. (*a*) Name the kind of verse used in ext. (*a*); give the scheme and scan the first four verses. (*b*) Explain the syntax of the sentence in *Italics* in extract (*a*). (*c*) What is the force of the Future Participles *inspectura, ventura?* (*d*) Note the import of the Tense and Mood in *defendi possent—defensa fuissent.*

3. Translate the following extracts, pointing out the construction :—(*a*) sinQtalia fando temperet a lacrimis? (*b*) Huc delecta corpora sortiti includunt cæco lateri. (*c*) Fidens animi. (*d*) Caeloque educere iussit. (*e*) Laocoon ductus neptuno sorte sacerdos.

4. Translate Cæsar, Bell. Gall., Bk. I. :—

(*a*) Postero die castra ex eo loco movent: idem facit Cæsar; equitatumque omnem, ad numerum quatuor millium, quem ex omni Provincia et Æduis atque eorum sociis coactum habebat, prænittit, qui videant, quas

in partes hostes iter faciant. Qui, cupidius novissimum agmen insecuti alieno loco cum equitatu Helvetiorum prœlium committunt; et pauci de nostris cadunt. Quo prælio sublati Helvetii, quod quingentis equitibus tantam multitudinem equitum propulerant, audacius subsistere, nonnunquam ex novissimo agmine prœlio nostros lacessere, cœperunt.

(*b*) Multa ab Cæsare in eam sententiam dicta sunt, quare negotio desistere non posset, et "neque suam, neque Populi Romani consuetudinem pati, uti optime meritos socios desereret: neque se judicare Galliam potius esse Ariovisti, quam Populi Romani. Bello superatos esse Arvernos et Rutenos ab Q. Fabio Maximo, quibus Populus Romanus ignovisset, neque in provinciam redegisset, neque stipendium imposuisset. Quod si antiquissimum quodque tempus spectari oporteret, Populi Romani justissimum esse in Gallia imperium: si judicium Senatus observari oporteret, liberam debere esse Galliam, quam bello victam suis legibus uti voluisset."

What is meant by *Oratio Obliqua* and *Oratio Recta?*

6. Construe (*a*) Hoc responso dato. (*b*) Postero die. (*c*) Qui videant. (*d*) Quo prœlio. (*e*) Dies quindecim. (*f*) Iter fecerunt. (*g*) Quibus populus Romanus ignovisset. (*h*) In præsentia. (*i*) Coactum habebat.

7. Parse the following words, giving the Principal Parts of the verbs, and the Nominative Singular and Plural of the Nouns and Adjectives:— Nuntiatum esset; pedum; repulsi; vim; mandarunt; institutos esse; sublati; sint erepturi; interpretibus: inscientibus.

(B)

8. Translate, Cicero, In Cat. Orat. II.:—

Hosce ego non tam milites acres, quam *infitiatores* lentos esse arbitor. Qui homines, primum, si stare non possunt, corruant: sed ita, ut non modo civitas, sed ne *vicini* quidem proximi sentiant. Nam illud non intelligo, *quamobrem*, si vivere honeste non possunt, perire turpiter velint: aut *cur* minore dolore perituros se cum multis, quam si soli pereant, arbitrentur. Quintum genus est *parricidarum, sicariorum*, denique omnium *facinorosorum:* quos ego a Catilina non revoco. Nam neque divelli ab eo possunt: et pereant sane in latrocinio, quoniam sunt ita multi, ut eos capere *carcer* non possit. Postremum autem genus est, non solum numero, verum etiam genere ipso atque vita: quod proprium est Catilinæ, de ejus delectu *immo* vero de complexu ejus ac sinu; quos pexo capillo, nitidos, aut *imberbes*, aut bene *barbatos* videtis: *manicatis* et *talaribus tunicis;* velis *amictos*, non togis, quorum omnis industria vitæ, et vigilandi labor in antelucanis cœnis expromitur.

9. Give the etymology of the words in Italics in the above ext.

10. (*a*) Give the Pefect Indic. (1st. sing.), Supine, and Present Infin. of:—*jaceo, jacio, pario, capesso, tego, gigno, venio, mordeo, jungo, soleo.* (*b*) Mention any numerals and pronominal adjectives that have their Gen.

Sing. in-*ius*. and their dative in-*i*. (*c*) Give the Genitive and Dative Singular, and the gender of,—*cinis, os, as, nex, caro, ordo, obses, heres, comes* and *os* (the mouth). (*d*) Compare *intra, magnopere, diu, prope*.

11. (*a*) Write out the 1st Future of *fero* and *jubeo;* the Perf. Indic. of *fluo* and *cerno;* and the Pres. Subj. of *sono* and *volo*. (*b*) What cases follow *utor, placeo, infero, servo, rogo, parco*. (*c*) Give instances of Defective, Inceptive, Frequentative, Deponent, and Semi-deponent verbs.

12. (*a*) Give the Latin equivalent for :—"any one at all; a certain one; whosoever; one of two; any one you will." (*b*) Translate into Latin :—(1) I come to see the battle (in more ways than one). (2) He is wise who rules himself. (3) They are building a city. (4) He conquered many enemies. (5) The land is divided into four parts.

FRENCH.

FRIDAY, JUNE 3RD :—MORNING, 11 TO 12.30.

Examiner,.....P. J. DAREY, M.A., B.C.L., LL.D.

1. Translate this extract or the next (not both):

Le requin blanc.

La vue du requin blanc avec ses (1) machoires béantes, ses yeux (2) farouches, ses nageoires larges et soyeuses (3) qui s'agitent comme la crinière d'un lion est quelque chose d'effrayant. Cet (4) animal, le plus vorace de tous les poissons, fréquente toutes les mers. Sa gueule est armée (5) de plusieurs rangées de dents (6) tranchantes et pointues. On prétend qu'il est si friand de chair humaine qu'il suit quelquefois pendant plus d'un mois les vaisseaux (7) dans lesquels il y a quelque malade.

DUVAL, *Lectures choisies.*

2. Translate this extract or the preceding one.

Départ des croisés.

Dès (8) que le printemps parut (9) rien ne put (10) contenir l'impatience des (8) croisés, ils se mirent (11) en marche pour se rendre dans les lieux où (12) ils devaient se rassembler. Le plus grand nombre allait à pied; quelques cavaliers paraissaient au milieu de la multitude; plusieurs voyageaient (13) montés sur des chars trainés par des bœufs ferrés; d'autres côtoyaient la mer, descendaient les fleuves (14) dans des barques; ils étaient vêtus diversement, armés de lances, d'épées, de jalevots, de massues de fer.

DAREY, *Lectures françaises.*

3. *Explain fully the following remarks on words from the first extract:* (1) Why is *ses* plural translated by a singular in English? Give the rule. (2) What is the singular of *yeux?* What is its other plural? When is it

used? (3) What is the masculine of *soyeuses?* Give the rule to form its feminine. (4) Why has this demonstrative adjective this form? (5) Why has *armée* two *e's?* Give the rule. (6) What English word is derived from *dents?* (7) How is the plural of that noun formed? Give the rule.

4. Or the following from second extract: (8) Translate *dès, des, lés;* also (12) *où* and *ou.* (9, 10, 11) Parse *parut, put, mirent.* (13) What is the difference of meaning between the English word *voyage* and the French word *voyage?* (14) What is the difference in French between *fleuve* and *rivière?*

5. Write in full the *Preterite* or *Past definite,* the *Subjunctive present* and the *Preterite* or *Past indefinite* of *être, rendre, se promener* and *naître.*

6. Translate in French :—

Montreal, the 3rd of June, 1887.

I have received with an extreme pleasure, my dear child, your last letter, not dated. I have found it full of good feelings and good resolutions. I am entirely of your opinion, he who *wishes* to do something succeeds in doing it; but the most difficult thing in the world is to *wish.* No one can know what is the power of the will *even in arts.*

7. Dictation.

Mes cousins m'ont envoyé des fruits que j'ai trouvés délicieux ; je les en ai remerciés dans la lettre que je leur ai adressée. Quant aux pommes que j'ai reçues de mes neveux, je ne les ai pas trouvées si bonnes que celles qu'ils m'ont données l'an dernier; cependant ce sont les mêmes arbres qui les ont produites. Nous avons enfin obtenu la permission que nous avons demandée; mais nous la devons au zèle que nos amis ont apporté à nous servir, aux démarches qu'ils ont faites, aux peines qu'ils se sont données pour réunir tout ce qui pouvait convaincre le ministre qui la leur a accordée.

GERMAN.

TUESDAY, JUNE 7TH :—MORNING, 9 TO HALF PAST 10.

Examiner.....C. F. A. MARKGRAF, M.A.

1. Translate into English :—

(A) Ein Wanderer kam im heißesten Sommer zu einer Quelle. Er war stark und lange gegangen; Schweiß stand auf seiner Stirne und seine Zunge war vom Durste fast vertrocknet. Da sah er dies silberhelle Wasser, glaubte, hier neue Kräfte zu sammeln, und trank mit gierigen Zügen. Aber die schneidende, zu schnell abwechselnde Kälte wirkte so schädlich auf ihn, daß er zu Boden sank.—„Ach, schändliches Gift!" rief er. „Wer hätte unter einem so reizenden Anschein solch eine Bosheit vermuthet?"

(B) Sagt mir, ihr holden Töchter der rauhen, schwarzen Erde, wer gab euch eure schöne Gestalt? Denn wahrlich von niedlichen Fingern seid ihr gebildet. Welche kleinen Geister stiegen aus euren Kelchen empor? Und welch Vergnügen fühltet ihr, da sich Göttinnen auf euren Blättern wiegten? Sagt mir, friedliche Blumen, wie theilten sie sich in ihr erfreuend Geschäft- und winkten einander zu, wenn sie ihr feines Gewebe so vielfach spannen, so vielfach zierten und stickten?

Aber ihr schweigt, holdselige Kinder, und genießet eures Daseins. Wohlan mir soll die lehrende Fabel erzählen, was euer Mund mir verschweiget.

Herder, Die Lilie und die Rose.

(C) Sprache, schön und wunderbar,
Ach, wie klingest du so klar!
Will noch tiefer mich vertiefen
In den Reichtum, in die Pracht;
Ist mir's doch, als ob mich riefen
Väter aus des Grabes Nacht.

Klinge, klinge fort und fort,
Heldensprache, Liebeswort!
Steig' empor aus tiefen Grüften,
Längst verscholl'nes, altes Lied!
Leb' auf's Neu in heil'gen Schriften,
Daß dir jedes Herz erglüht!

Max von Schenkendorf, Die Muttersprache.

(D) Kennst du das Land, wo die Citronen blühn,
Im dunkeln Laub die Goldorangen glühn,
Ein sanfter Wind vom blauen Himmel weht,
Sie Myrthe still und hoch der Lorbeer steht?
Kennst du es wohl?
Dahin! Dahin!
Möcht' ich mit dir, o mein Geliebter, ziehn.

Kennst du das Haus? Auf äulen ruht sein Dach,
Es glänzt der Saal, es schimmert das Gemach,
Und Marmorbilder stehn und sehn mich an;
Was hat man dir, du armes Kind, gethan
Kennst du es wohl?
Dahin! Dahin!
Möcht' ich mit dir, o mein Beschützer, ziehn.

Goethe, Mignon.

NOTE.—Only *two* of the four pieces given above are to be translated, viz. *one* in *prose*, and *one* in *poetry*.

2.* (*a*) What classes of nouns are *masculine*, or *feminine*, or *neuter* in German? Mention any exceptions you know of. (*b*) *Which plural* endings of masculine, femininine and neuter nouns *do not* admit of the modification of the radical vowel?

2.* (*a*) Give the gender, meaning and Nominative Plural of:—Feder, Kaufmann, Freundin, Baumgarten, Arzt, Nachbar, Waſſerglas, Wort, Knabe, Gott, Feſt, Kloſter. (*b*) Convert the following nouns into diminutives:— Kaſten, Blatt, Stadt, Kirche, Tochter, Vogel, Buch, Land Auge.

3. (*a*) Decline in the Singular:—good hard steel (Stahl, m.) fine ripe fruit (Obſt, n.). (*b*) Decline in both numbers:—his eldest son, that young woman; which small village (Dorf, n.)

4. (*a*) Give the Comparative and Superlative of:—kalt, ſtark, hoch, oß, klar, ſtolz, arm, neu, dankbar. (*b*) Write down *six* adjectives formed from nouns of substance. (*c*) Express in letters:—29, 101, 531, 7683.—Translate:—the *fourth*, a *sixth one*; *twice*, a *third time*.

5.* Conjugate erzählen and zurückſchicken, giving the 3rd Sing. and st Plural of the six tenses of the Indicative *active*.

5.* Parse the following forms of verbs, and give their Present Infinitives:—warteteſt, darf, ſeid geritten, hatte vorgeleſen, habt verloren, magſt waren geweſen, zieht aus, wirſt gefunden haben, angekommen ſein, mußt hat wiedergebracht.

(6) Translate into English:—

Es iſt jetzt für jederman ſehr nützlich, mehrere fremden Sprachen zu lernen In unſeren Wäldern wachſen viele Tannen, Eichen und wilde Sträucher. Die Bauern machen Heu auf den Wieſen. Ich wohne ſeit einem Vierteljahre bei meinem Onkel. Reiſt dein Neffe nicht ſchon ein ganzes Jahr lang? Ja; aber wir hoffen, ihn nächſten Monat wiederzuſehen. Bitte, ſagen Sie dem Diener, dieſe Briefe nach Hauſe zu tragen. Schreiben Sie Ihre Aufgabe ab! Ich kann Ihnen das nicht gewiß verſprechen. Wir haben Blumen ſehr gern. Was thut ihr am liebſten? Ich rate dir, dieſen Morgen nicht auszugehen, denn der Himmel iſt mit dunkeln Wolken bedeckt; ich denke, es wird regnen.

NOTE.—Only *one* of the two questions marked 2* is to be answered. The same observation applies to the questions marked 5*.

GEOMETRY.

FRIDAY, JUNE 3RD :—MORNING, 9 TO 11.

Examiners, ... { G. H. CHANDLER, M.A.
REV. G. THORNELOE, M.A.

Only two questions from each Division to be answered.

Division I.

1. Draw a straight line at right angles to a given straight line from a given point in the same.

Given a straight line and two points not in the line, find a point in the line which is equally distant from the given points.

2. If at a point in a straight line two other straight lines on opposite sides of it make the adjacent angles together equal to two right angles these two straight lines shall be in one and the same straight line.

3. If a straight line fall upon two parallel straight lines, it makes the alternate angles equal to one another.

Division II.

4. Describe a parallelogram equal to a given rectilineal figure, and having an angle equal to a given angle.

5. If a straight line be bisected and produced to any length, the rectangle contained by the whole line thus produced and the part of it produced, together with the square on half the line bisected, is equal to the square on the line made up of the half and the part produced.

6. Divide a straight line into two parts, so that the rectangle contained by the whole line and one of the parts may be equal to the square on the other part.

Division III.

7. If one circle touch another internally the two circles cannot have the same centre.

8. The opposite angles of any quadrilateral figure inscribed in a circle are together equal to two right angles.

9. From a given cicle cut off a segment containing an angle equal to a given angle.

ALGEBRA.

FRIDAY, JUNE 3RD :—AFTERNOON, 2 TO 3.30.

Examiners, ... { G. H. CHANDLER, M.A.
REV. G. THORNELOE, M.A.

Only two questions from each Division to be answered.

Division I.

1. Divide $(x+y)^2 - 2(x+y)z + z^2$ by $x+y-z$.

2. Find the greatest common measure of $x^4 + x^2 - 6$ and $x^4 - 3x^2 + 2$.

3. Find the least common multiple of $x^3 + 5x^2 + 7x + 2$ and $x^2 + 6x + 8$.

Division II.

4. Simplify $\{x(x-a) - a(x-a)\}\{x(x-a) - a(a-x)\}$

5. Simplify $$\cfrac{1}{1+\cfrac{x}{1+x+\cfrac{2x^2}{1-x}}}$$

6. What quantity when multiplied by $\frac{1}{x-y}$ will give $\frac{1}{x^2-y^2}$

Division III.

7. Solve $\frac{3x-2y}{4} - \frac{x-y}{2} = 1$, $\frac{x}{3} + \frac{y}{2} = 4$.

8. Find a number such that if $\frac{3}{8}$ of it be subtracted from 20, and $\frac{5}{7}$ of the remainder from $\frac{1}{4}$ of the original number, 12 times the second remainder shall be half the original number.

9. The ages of a father and his son, added together and divided by 6, amount to 10. The difference between their ages, divided by 4 gives a quotient of 9. What are their ages?

Division IV.

10. Write out $(1 + x - x^2)^2$.

11. Extract the square root of $9x^4 - 6x^3 + 7x^2 - 2x + 1$.

12. Simplify

$$\sqrt{\{4a^2 + \sqrt{(16a^2x^2 + 8ax^3 + x^4)}\}}$$

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TRIGONOMETRY.

TUESDAY, JUNE 7TH:—AFTERNOON, 2 TO 3.30.

Examiners, ... { G. H. CHANDLER, M.A. / REV. G. THORNELOE, M.A.

Only two questions from each Division to be answered.

Division I.

1. Find the number of degrees, minutes and seconds in an angle which is at the centre of a circle, and is subtended by an arc which is equal to the radius.

2. Give the definitions of the sine, tangent and secant of an angle. In what quadrants are these ratios + ? What names are given to their reciprocals ?

3. Find the sine, cosine, etc., of 45° and of 135°.

Division II.

4. Find all the trigonometrical ratios in terms of the tangent.

5. Show that

(*a*) $\sec^2 A = 1 + \tan^2 A$,

(*b*) $\cot^2 A - \cos^2 A = \cot^2 A \cos^2 A$,

(*c*) $\sin (90° - A) = \cos A$.

6. The elevation of the top of a wall is 60° ; 30 feet farther from the wall the elevation is 45° ; required the height of the wall.

Division III.

7. Prove that $\cos (A + B) = \cos A \cos B - \sin A \sin B$.

8. Show that

$$\frac{\sin 33° + \sin 3°}{\cos 33° + \cos 3°} = \tan 18°.$$

9. Show that $\cos 2A = \cos^2 A - \sin^2 A = 1 - 2 \sin^2 A$.

GEOMETRICAL AND FREEHAND DRAWING.

WEDNESDAY, JUNE 8TH :—MORNING, 9 TO 12.

Examiner, ... C. H. MCLEOD, MA.E.

Section I.

1. Find the centre of a given circle.

2. Divide a straight line, 2 in. long, into parts having to each otheteas ratio,—2 : 3 : 5.

3. How are the solids known as,—"Octahedron," "Dodecahedron," "Icosahedron" formed ?

4. Describe a method of specifying the forms of curves, and give the names of the lines employed.

5. Construct one quadrant of the involute of a circle of 2 in diameter.

6. There is an isosceles triangle which has an area of 5 sq. in., and a base 2.5 in. long. From a point in one of the sides, one inch distant from an end of the be, draw a line to cut off an area of 2 sq. in.

Section II.

1. Draw the perspective projection of a cube, which stands above the level of the eye and to the right of the spectator, show the vanishing points (*a*) when two of the faces are parallel to the picture plane, (*b*) when all the vertical faces are inclined to the picture plane.

2. Make a freehand drawing of the objects before you, as they appear from your point of view :—

(*a*) The hexagonal pyramid, standing on a square pedestal.

(*b*) The ring of square section.

Section III.

1. Draw a maple leaf rosette in a square whose side is four inches.

2. Define the oval and the ellipse.

3 Draw a pitcher, a glass goblet, or a vase at least four inches in height.

4. Draw a regular hexagon and fill it with an original design, making the figure symmetrical.

NOTE.—Answer the questions in Sections I and II or in Sections I and III. Do not answer questions in both Sections II and III.

In the problems in Section I construction lines are to be dotted, and all results are to be obtained by direct construction, not by trial. No mechanical measurement will be allowed in answering the questions in Sections II and III.

ENGLISH LANGUAGE.

TUESDAY, JUNE 7TH :—AFTERNOON, 3.30 TO 5.

Examiners, ... { CHAS. E. MOYSE, B.A.
REV. PROF. SCARTH, M.A.
REV. PROF. READ, M.A.
PAUL T. LAFLEUR, M.A.

(You are requested to answer any two (but not more than two) questions in each of the Divisions I. and III. From Division II. take the Analysis, *which is obligatory*, and any other question you please.)

I.

1. When you find true diphthongs in the following words, underline them : ease, tide, sleep, how, receive, toil, pursue. Give rules for the division of words into syllables.

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2. Notice the history and formation of these words: quoth, wot, methinks, y-clept, dight, ought.

3. Mention the personal and interrogative pronouns, and make a few historical notes on them. Write a sentence in which a pronoun stands for a clause.

4. What are the uses of the Gerund and Participle in English? Make a note on their form.

II.

1. Examine the language of the following extract:

In lissouris and on leys litill lammys
Full tayt and tryg socht bletand to thar dammys,
Tydy ky lowys, veilys by thame rynnys,
All snog and slekit worth thir bestis skynnys.

2. Give the origin and meaning of the names of the cases and of the word case itself, *or* show the changes undergone by the suffixes ma, ant, tar, man.

3. Examine the formation of compound tenses.

4. Analyse:

Of little use the man, you may suppose,
Who says in verse what others say in prose.
Yet let me show a poet's of some weight,
And, though no soldier, useful to the State.

III.

1. Give Trench's observations on Eau de Vie, Hurricane, Tory, Mob, Pantaloons.

2. State briefly Trench's arguments in favor of Phonetic writing. Criticize them briefly.

3. We have two *ounces*, two *seals*, two *quires*, two *doles*, two *races*: derive each. What do you call words similarly spelt?

ENGLISH LITERATURE.

Examiners,..... ..... { CHAS. E. MOYSE, B.A. / REV. PROF. SCARTH, M.A. / REV. PROF. READ, M.A. / PAUL. T. LAFLEUR, M.A.

TUESDAY, JUNE 2ND:—MORNING, 10.30 TO 12.

(You are requested to answer any two (but not more than two) questions in *each* of the Divisions, I., II. and III.)

I.

1. Describe shortly the origin and development of the Drama in England.

2. Give a short account of the life and works of Milton or Spenser.

3. Who wrote, and at what time, Comus, Tamburlaine, The Temple, Confessio Amantis?

4. What were the chief works of Hooker, Ben Jonson, Chapman, Bede, Prynne?

II.

1. Give a description of the last Canto of the Lady of the Lake.

2. Explain the words, cumber, coronach, pibroch, quarry, glaive, kern, morricer, weed, sooth, vair.

3. Describe the scenery introduced in the Lady of the Lake.

III.

1. From whence did Shakspeare obtain his materials for his Julius Cæsar?

2. Point out any anachronisms or seeming errors in this play.

3. Explain:—Falling sickness; objects, arts and imitations; to wear a kerchief; prick'd in the number of our friends; his glory not extenuated.

4. Of whom are the following expressions used?

(*a*) She is dead and by strange manner.

(*b*) A barren-spirited fellow.

(*c*) His silver hairs will purchase us a good opinion.

(*d*) He sits high in all the people's hearts.

HISTORY.

MONDAY, JUNE 6TH:—AFTERNOON, 2 TO 3.30.

Examiners, ... { CHAS. E. MOYSE, B.A. / REV. PROF. SCARTH, M.A. / REV. PROF. READ, M.A. / PAUL T. LAFLEUR, M.A.

(You are requested to answer any two (but not more than two) questions in *each* of the Divisions I. and II., and any three in Divisions III.; in all, not more than seven.)

I.

1. Explain the terms Helot, Areopagus, Archon, Tyrant, Ostracism.

2. Give a brief account, with dates, of the expedition of Xerxes against Greece.

3. Who were Solon, Pisistratus, Aristides, Leonidas, Epaminondas?

4. State in their order, without detail but with dates, the conquests of Rome in (*a*) Italy, (*b*) Western Europe, (*c*) Africa.

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II.

1. Make brief notes on Agrarian Laws, Patricians, Slave Wars, Proscription, The Second Triumvirate.

2. Give, in their order, the names of three distinguished emperors of Rome, who made important changes in the government of the Empire, and indicate the character of those changes.

3. Mention the motives which inspired Mahomet and his followers, and add a brief sketch of his life. In what countries is Mahometanism still a political power?

III.

1. When, and under whom, did the first invasion of Spain by the Moors take place? State in general terms what portions of Spain they colonised, and notice some features of the final struggle.

2. What parts did the following men play in the history of their time and with what result: Rollo Ganger, Tamerlane, Marat, Rienzi, Coligny?

3. What was the origin of the Thirty Years' War? State when it began and ended. Mention in their order three important battles, and state between what nations they were fought. Give the names of six noted men who are conspicuous in the history of the war either as statesmen or as generals.

4. Give an account of the liberation of Switzerland from foreign rule.

5. Explain: Capitularies, Frondeurs. The Pragmatic Sanction, National Asssmbly, "L'Etat c'est Moi," Diet of Worms, Assize of Jerusalem.

GEOGRAPHY.

FRIDAY, JUNE 3RD:—AFTERNOON, 3.30 TO 5.

Examiners,.. ..... { CHAS. E. MOYSE, B.A. / REV. PROF. SCARTH, M.A. / REV. PROF. READ, M.A. / PAUL T. LAFLEUR, M.A.

(You are requested to answer any two (but not more than two) questions in *each* of the Divisions I., II. and III.)

I.

1. What is meant by zone, tide, ecliptic, rational horizon, organic matter, tundra?

2. To what are the great changes on the earth's surface due?

3. Describe and account for volcanoes, geysers, earthquakes.

II.

1. Whence are mostly derived the world's supplies of iron, palm-oil, olive-oil, petroleum, coal, tin, silk?

2. What are the chief exports and imports of Canada?

3. Describe the products of the African continent.

III.

1. Describe carefully the course of the Danube *or* the Mississippi.

2. Mention the countries bordering on the north side of Lake Ontario.

3. Name the highest mountain in the Northern and Southern Hemispheres respectively, with their elevation.

4. Where are Trinidad, Herat, Cologne, Ballarat, Melbourne, Teneriffe? For what are they remarkable?

5. Under what government are Sumatra, Tonquin, Bokhara, Fiji Islands, Strasbourg, respectively?

6. Give the six most important cities in the world, with their approximate population. To which race of mankind do the inhabitants of each belong?

ELEMENTARY CHEMISTRY.

TUESDAY, JUNE 7TH :—MORNING (1½ hr.).

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

I.

1. How may Hydrogen and Oxygen be obtained from Water, and Nitrogen from Air?

2. What takes place (*a*) when dilute Sulphuric Acid is poured upon Zinc, (*b*) when a solution of Silver Nitrate is added to one of Common Salt?

3. Explain the meaning of Allotropy, and state briefly what you know with regard to the Allotropic forms of Carbon and Sulphur.

II.

1. What materials would you require for the preparation of each of the following compounds :—(*a*) Nitric Acid. (*b*) Ammonia. (*c*) Carbonic Oxide. (*d*) Marsh Gas?

2. What do you understand by double decomposition? Illustrate by means of an equation.

3. Explain the action of Washing Soda in softening a hard Water.

III.

1. State what you know with regard to the preparation and properties of Sulphurous Anhydride.

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2. Give the formula of each of the following substances:—Sal-ammoniac Fluor-span, Phosphoric Anhydride, Sulphuretted Hydrogen, Laughing Gas.

3. State what you know, (*a*) with regard to the construction of the Davy lamp, and (*b*) concerning the use of the mouth blow-pipe.

Note.—Candidates may select any two questions from each group.

BOTANY.

MONDAY, JUNE 6TH:—AFTERNOON, 3.30 TO 5.

Examiner,.....D. P. PENHALLOW, B. Sc.

I.

1. What are the floral envelopes, and how may they be distinguished?

2. Explain the difference between an herb, a shrub and a tree.

3. What are the cotyledons, and how many are there in a bean, a grain of corn and a pine seed? What terms may be used to express the difference?

II.

4. State the principal forms of leaf arrangement.

5. Mention some of the modifications of the seed designed for its distribution.

6. From what sources and in what forms does the plant obtain its food?

III.

7. Enumerate the principal kinds of fruits. Examples.

8. Explain the difference between an exogenous and an endogenous plant.

9. Describe the plant given.

The Candidate is required to answer two questions in each division. Number nine is imperative.

The examiner will kindly supply any common wild flower.

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